THE CULTIVATOR.

THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

VOL. XIII. ALBANY, N. Y., MAY, 1865. No. 5.

PUBLISHED BY LUTHER TUCKER & SON,
EDITORS AND PROPRIETORS, 395 BROADWAY, ALBANY, N.Y.

TERMS—EIGHTY CENTS PER YEAR—Ten copies of THE CULTIVATOR and Ten of the ANNUAL REGISTER OF RURAL AFFAIRS, with one of each free to the Agent, Eight Dollars.

THE CULTIVATOR has been published thirty-one years. A NEW SERIES was commenced in 1853, and the twelve volumes for 1853, 4, 5, 6, 7, 8, 9, 60, 61, 62, 63 and 64, can be furnished bound and postpaid, at $1.25 each—the set of 12 vols. sent per express for $12.

"THE COUNTRY GENTLEMAN," a weekly Agricultural Journal of 16 quarto pages, making two volumes yearly of 416 pages, at $2.50 per year, is issued by the same publishers.

Our Prize Essays.

THE CULTIVATION OF TURNIPS.

BY WM. ANDERSON, ROCKFORD, ILL.

In attempting to compete for the premium offered for the best Essay on the Cultivation of Turnips I do not expect to write an elaborate article, but simply to relate my own practical experience, extending over a number of years. In doing this, the pronoun I can scarcely fail of being very prominent, which must be excused.

The cultivation of turnips successfully necessarily involves a good preparation of the soil, and also of manures. It has been my practice to grow turnips or mangold wurtzel after wheat, or some other white crop; just so soon after harvest as the weeds have taken a pretty good start, the land has been plowed with a skeleton plow—that is, a plow without any mould plate—simply a broad share with a couple of prongs set in it, so as to loosen all the soil, or if on a very light soil, a good cultivator will do it effectually with a little more horse-power. This being done in dry weather, will usually destroy all weeds and grass roots. Before winter sets in the land should be plowed deep and laid up dry, so that early in the spring it may be cross-plowed and cultivated. Should any be so unfortunate as to have couch grass, knot grass, or whatever it may be called, this is the time to get it out, and in this case the land will have to be rolled and harrowed, and got fine, that it may be raked off either by hand or horse power—that is if the weather is not sufficiently hot to kill it. The burnt ashes of this, however, is very good to mix with bone dust, or any other artificial manure. If possible, the land should be left in this state for the weeds to grow, say two or three weeks, then plowed again and got into a fine tilth. It will now be ready for sowing turnips, and as my practice has generally been on the ridge system, having obtained much the heaviest crops by this plan, I will describe that first.

RIDGE CULTURE.—If barnyard manure is to be used, plenty of force, as well as a speedy plan of operation, is required. I have usually opened out ten or twelve ridges 27 inches apart, (which is sufficient width for all practical purposes,) being the distance the wheels of the waggon or cart will track well. I have invariably had the barnyard manure hauled out to the lot for a compost in winter, (that is all I could get of it, and especially for the Ruta Bagas,) to be convenient, and save labor in sowing time. Supposing this to have been been done, my practice in putting on manure has been to have just so many waggons (or carts, which are far preferable for this purpose,) as will keep two plows opening and closing the ridges as soon as the manure is distributed in the furrows. To do this requires two teams in addition to the plow team, to keep the plow moving, and if the lot is large, it will require an extra vehicle at the manure heap. When carts are used I have one man to drag out the manure from the cart in the ridges, keeping the team moving all the time, with a boy to drive, which requires another man and two boys to spread the manure evenly in the furrows, taking seven ridges at a time. This amount of help will keep the plow in motion, and is the most expeditious I have ever adopted, of course expecting every man to do his duty, and having a full cart always up as soon as the other is empty. In covering up the manure, or closing the furrows, we cover it with one furrow and open another on the farther side of the ten or twelve ridges already opened, so as to have the whole thing moving. To cover the manure thoroughly it will require even spreading in the furrows, not left on the ridges, and the manure pretty well decomposed. In following this method one plow will open and cover in good style 2 acres per day, and as I have done this many days in succession myself, I know whereof I affirm. However I have frequently had two plows going, which consequently requires a little more help, but not nearly double; therefore a large quantity involves comparatively less expense than a small one.

In hot weather it is very essential to have the manure all covered at night, to keep both the land and manure as moist as possible. I have usually rolled the ridges down unless when I have used a drill with concave rollers, taking two ridges at a time, in sowing the seed.

FLAT CULTURE.—With regard to the flat culture which some prefer, preparing the land would be the

same—spreading the manure over the surface and plowing it in. Some prefer doing this in the fall. The land should be rolled and the seed drilled 18 inches apart. I have obtained very good crops in this way, but not so much weight as on ridges, and it is considerable more expense in hoeing. If sown broadcast, the seed should be sown and rolled down.

SEEDING.—In putting the turnip seed in ridges I have generally used a drill covering three ridges, either with or without artificial manure. To do this properly, of course the ridges must be made true and straight; otherwise the drill would not keep the centre of the ridge, and they would be difficult to cultivate, and it is quite as easy for a good plowman to make a ridge straight as crooked—in fact rather more so. With a drill taking only two ridges, having concave rollers and those made to vary according to the width of the ridge, there is not the necessity for such particular work. I have occasionally used a drill taking only one ridge, which is slow work. Probably some of our western farmers will say this is altogether too much expense. So it may be on new land that does not require any manure to grow splendid turnips, as we have had this year, but even here a little artificial manure with the seed is highly important to give the plants a vigorous start, to get out of the way of the fly, and other numerous enemies of the turnip crop, and on old land, such as a considerable portion of New-York State, and some others, the expense is trifling compared to the beneficial result.

VARIETIES.—As to the kind of turnips, I have sown the common Red Top or White Stone for first consumption; Scotch Yellow for second, and ruta bagas to consume last. But in sowing, this order wants reversing—ruta bagas may be sown the last week in May, up to the middle or even 20th of June, and the other kinds later. As to seed I have been called extravagant, frequently allowing three pounds per acre of ruta bagas, in a dry season, but generally only two pounds. I have known others to sow only one pound, and lose the crop in consequence—a thing I never did, having always acted on the principle that it is better to have ten plants to cut up rather than to want one in the proper place.

PREPARATION OF THE MANURE—ARTIFICIAL MANURES.—As to preparing manures a long essay might be written, but having already said something about getting out barnyard manure, all that is needful to add here is that it should be turned over early in the spring and covered over again with muck or soil, to preserve the ammonia, and so that it may get pretty well decomposed before it is wanted for use.

I have used several different kinds of artificial manure, chiefly of home manufacture. Bone dust I have bought large quantities of, and have also bought bones and had them ground. When using bone dust, or half inch bones, I have, as is believed, a much better way than dissolving them with sulphuric acid, burning things up, and very much better for the crop, whatever it may be. I have never made this public, but shall now. Having procured all the bone dust needed for the season, have generally mixed it with ashes, two or three bushels to one of bones—the ashes being from grass roots if we had it, if not by burning the sward taken from the fence corners or anywhere we could get it to make sufficient quantity to mix with the bone dust. This must be mixed thoroughly and allowed to remain two or three weeks, when the bones will be completely decomposed, so that they will rub to pieces between the finger and thumb. This mixture I have drilled in, in different quantities, according to the strength of the land, from 30 to 80 bushels per acre. When using barn-yard manure, have not allowed more than 10 or 12 of bones, but in using bones and ashes alone, I would use 15 to 20 bushels of bones to the acre, besides the ashes—which will produce a good crop, and very easy to cultivate and hoe. If put on with a drop drill one foot apart, 10 bushels will be equal to 20 in a continuous stream, for this immediate crop.

I have also used large quantities of night-soil, which probably is the best of all for turnips. I have invariably prepared it on the premises, using of course all we could make, beside buying of the scavengers when near a town or city, paying them $5 per load for it. The mode of preparation is to mix with ashes as above described, with this difference—use them as hot as they can be handled, taking the night soil fresh from the vault. In this way I have drilled it within a week from taking it out, but it is better to lie longer, and to be thoroughly turned and mixed, when it will become completely deodorized, so much so that the best of judges could not tell what it was composed of. I have frequently seen it taken up in the hand and smelt of, without exciting the least suspicion as to what it was.

I have also used a considerable quantity of pigeon manure mixed in the same way. Fortunate is he who lives near a pigeon roost. This most valuable manure is produced in Michigan in immense quantities, and it would pay on a large farm to build a house for tame pigeons in large quantities, for the sale of pigeons will soon return the cost of building, having the manure gratis. This home-made guano is very powerful and requires using with caution. I have never bought any guano for turnips, nor any other thing except bones. For the corn crop I have used guano with very good effect. Having sold a straw stack to the paper makers, I spent the money in guano for this purpose, and had 20 acres of good corn from it, merely by dropping a little mixed with wood ashes on every hill, after it was up.

CULTIVATING AND HOEING.—The best cultivator I have used, is one I had made to order, having a broad share 12 to 15 inchees wide, cutting both sides alike, and two curved knives two inches wide in the blade, adjustable to any width of ridge. In the side pieces I had seven harrow teeth, three on either side and one in the centre, which will effectually cut up all the weeds and leave the land in excellent condition, and may be run so close to the turnips that there is no need of side hoeing. If the land is in good order and the season favorable, the turnips will be ready to hoe and single out in three weeks, perhaps less. This I have generally had done by job work. One man and two small boys will do one acre per day, but if expert with the hoe may do considerably more. Of course every turnip grower knows the more frequently they are hoed the faster they grow. In hoeing turnips that are sown broadcast, it requires a man well accustomed to it to set them out properly.

HARVESTING.—Supposing now that a good crop has been obtained, next comes the harvesting. This I have done by topping the turnips with a hoe as they stand in the rows. A quick hand will top two acres per day; after this we run the skeleton plow, with a flat share, simply to cut the tap root, leaving the turnip in the same position. The man holding the plow can very easily tell when he is cutting the root in the right place, by the feeling of it. In speaking of this plan it will be understood to refer to ridge or drill work. When this has been done they are very easily picked up and thrown into the wagon or cart, and put into the cellar, or if there is not sufficient cellar room, into hills, piling them five or six feet at the bottom, and running them up as high as they will stand, covering with earth the same as potatoes, with this exception, that they will not bear entirely closing at the top—otherwise they will nearly all rot. A space of two or three inches left open will be sufficient to let the heat out, and this must be covered with a heavy thickness of straw, which should be drawn evenly, and a shovelful of earth thrown on every foot or two to prevent its blowing off. The frost will not penetrate through this, as the heat within will keep it out, provided they

have enough covering on the sides. I have had ruta bagas come out in capital order to the middle of May or 1st of June, or even later than that.

CONSUMPTION.—This opens a wide field which I have not time to enter upon at length, but may say that I have found the root crop one of the most profitable we can grow, having fed them out in a variety of ways,—in fattening sheep and cattle, to cows giving milk, to ewes, and also to young colts.

I have found them most profitable in fattening sheep, getting them to weigh 100 pounds dressed at 14 to 15 months old, taking the fleece off, of course. Feeding them to cattle is very profitable at present prices, but, if not actually stall fed, two or three-year old steers will pay well for having a few turnips through the winter, to keep them thriving all the time; then let them have two months of the best run of grass, and sell them fat in July, which will pay a most satisfactory profit. As to breeding sheep, mangold wurtzel answers the best, as they produce the largest quantity of milk, and do not require cutting. I have invariably cut ruta baga turnips for sheep; other turnips they will eat well without. The cutter I have used slices them five eighths by three-fourths of an inch for sheep, and for cattle twice that size, merely by turning the handle the other way. With one of these cutters two small boys can cut a bushel a minute quite easily, one to feed and the other to turn.

Turnip Taste in Milk and Butter.—Probably some will say feeding turnips to cows giving milk, will make the butter taste of turnips. This is simply from not knowing a remedy: it merely requires a very small quantity of nitre dissolved in hot water, and put into the milk before it is strained, most effectually to prevent any taste of the turnip—so much so, that I have fed turnips to a large number of cows all the winter, giving two bushels per day, and have sold many tubs of butter in the spring to the best judges, they not discovering the slightest turnip taste. The quantity of nitre must necessarily be regulated according to the number of cows kept.

I have not time to go into any particular account of profits, but have no doubt from my experience in feeding stock, that there is much more fattening matter from an acre of land in full crop of ruta bagas than there is in even 75 or 80 bushels of corn to the acre.

The foregoing is a brief statement of my own experience in turnip growing, and might have been better as to the nature of soils and other things connected with it, had it not been necessary to close up at once in order that this may reach you in season.

Rockford, Ill. WM. ANDERSON.

EARLY TURNIPS.

There is probably no season when fresh vegetables are more conducive to health than through the warm summer months. To be healthy, however, they should be freshly taken from the earth, and of quick, tender growth. But a small proportion of the rural population have yet learned the full value of the vegetable garden. The many are satisfied with a patch of early potatoes, thinking, as the works or rather want of works show, that the turnip is something to come in for fall or winter.

To raise the finest turnips for summer use, give a good top-dressing of muck and ashes. It will be well to mix them thoroughly on the surface a few days before using. The proportion of ashes will do very well when a half a bushel is mixed with half a cord of muck; but if more is used, the better. This furnishes a good soil for them to grow in. A top-dressing of guano will do them no injury. W. BACON.

Richmond, Mass.

Agricultural Statistics of the United States.

It may be rather late, after the lapse of five full years, to refer to the Agricultural Returns of the United States Census of 1860. But the Census Office has just published a volume devoted to these returns, including many interesting facts which cannot well be passed by without remark.

The Superintendent, Hon. J. C. G. KENNEDY, deserves the credit of prefacing this volume with one of the few sound and sensible articles on our agriculture which have ever appeared from the Government offices at Washington. With the assistance of competent associates in its preparation, it contains no little food for thought; and while we may not fully agree with all the positions assumed, we cannot but recognize the discrimination and judgment which they generally manifest. With little in the way of unduly magnifying our resources (which may well be left to speak for themselves,) we do not find, on the other hand, those sweeping assaults upon the shortsightedness and folly of our farmers, so often and causelessly repeated—assaults based upon the presumption that we are "exhausting the soils" of our older States, and which have given rise to such vastly exaggerated prognostications of reduced production here as were uttered by the English papers at the opening of the present war. Indeed the preface quotes the following remark from the London Mark Lane Express in which we venture to italicize a few words:

"It has long been our opinion that the grain-exporting power of the United States was likely rather to diminish than increase under the ordinary circumstances of the country. This opinion was derived *from the statistical notices of the census and of the Patent Office*, and confirmed by the statements of Jay, Wells, and other American writers on the subject."

The volume before us points out that although there may be *some* truth in speaking of our farmers as practicing "an exhaustive system of husbandry," still, in taking possession of a new country, they found the land already "*heavily manured by nature*," and that in availing themselves of this to a great degree, before proceeding to artificial manuring, they have only done as their own interests clearly demanded. And now that at the East we have in many cases reached the point at which not the *soil*, but nature's store of manurial material in it, has been mostly "exhausted," there may be reason to reprehend the slowness with which the farmer is brought to realize the fact, and "to adopt an intelligent system of rotation and manuring." Equally is there room for justly criticising the Western farmer in an imprudent and prodigal wastefulness of the soil-wealth at his command. "The farmer is wise who makes the transition from natural to artificial fertility easy and gradual, so as to avoid all sterility." But, as the writer of this introduction remarks, it is only a "mis-use of statistical facts" to assert, as was done we believe within a few years, on the floor of Congress, "that our Agriculture is rapidly declining, that the quantity of food produced here each year bears a smaller proportion to the number of acres under cultivation, and that over a very wide area some of the most useful crops bid fair to become extinct.". And, as the above extract shows, it has been the public documents of the government which have done the most to disseminate this idea—not by facts they really contained, but by "statistical

notices" from superficial writers, ready to adopt the assertions of those having artificial manures to sell, or simply reiterating stereotyped expressions which had an air of superior wisdom.

The introduction of the present volume is very full in calculations as between the agricultural productions of the several States in 1850 and 1860 respectively, and in the proportion borne by these productions to the population of the whole country and its several parts. Thus, taking three of the most important grain crops, we have the quantity of each raised *to each head of population*, in bushels and hundredths of bushels, in the four main divisions of the Union, and in our whole territory altogether, as follows:

	Wheat.		Indian Corn.		Oats.	
	1850.	1860.	1850.	1860.	1850.	1860.
New-Eng. States,	.40	.34	3.70	2.90	2.95	3.43
Middle States,...	5.33	3.69	9.11	9.04	8.20	8.65
Southern States,..	2.42	3.45	32.76	30.83	4.46	2.18
Western States,..	7.22	10.—	44.14	45.27	7.59	6.51
United States & Territories, ..	4.33	5.50	26.04	26.12	6.32	5.49

In other words, the United States in 1860 produced 550 bushels of wheat to each 100 of population, against 433 bushels in 1850; 2,612 of Indian corn against 2,604, and 549 of oats against 632—a considerable increase in wheat, about the same in corn, and a decline in oats, in proportion to population. So in three branches of animal products, we find the result, in pounds and hundredths of pounds, as below:

	Butter.		Cheese.		Wool.	
	1850.	1860.	1850.	1860.	1850.	1860.
New-Eng. States,..	16.10	16.42	9.94	6.89	2.59	2.09
Middle States,.....	16.08	21.50	7.94	6.15	2.33	1.81
Southern States,...	6.12	6.55	.13	.09	1.01	1.08
Western States,.. ..	14.33	16.08	3.92	2.78	3.41	2.46
United States and Territories, ...	13.51	14.62	4.11	3.29	2.26	1.92

There was an increase in the Union at large during the ten years, from 1,351 pounds of butter per 100 of population, to 1,462, and a decrease in cheese from 411 to 329 pounds, and in wool from 226 to 192 pounds.

Without going into farther detail at present in this direction, it should be stated that the increase in population from 1850 to 1860 was 35½ per cent., and that while some products, such as the oat crop and wool clip, did not increase as rapidly as the population of the country, they did nevertheless advance in a considerable ratio. Thus the production of wool in 1850 was 52,516,959 pounds, and in 1860, 60,364,913 pounds, an increase of about seven and three-quarter million pounds. It is interesting to add moveover that the increase in wool was greater in proportion than that in the number of sheep; in 1850 the product averaged 2.41 per head, and in 1860, 2.68—an increase of .27 or about a quarter of a pound per fleece.

As the United States Census only reports the products in bushels, &c., of the several crops, and not the areas in acres on which they were raised, we cannot accurately determine the average crops obtained *per acre* in 1860, and at former periods. But there is one way of arriving at a fair test on this point, to which we might wish that greater space had been devoted in the volume under consideration. We refer to the comparison which may be instituted between the increase in the aggregate *amount of land under cultivation*, and that of its various productions,—a comparison which would show quite as forcibly as that with the increase of population, as to whether or no "the quantity of food we produce bears each year a smaller proportion to the number of acres we cultivate." With the view of ascertaining the truth in this respect we have ourselves devoted some time to the following calculations, which if space permitted we should have been glad to carry out with regard to the several divisions of the Union, as well as in the aggregate for the whole country.

In giving these calculations it must be premised that there is one element of uncertainty in them, arising from the manner in which the area of our farming lands is reported—which is done under two heads, namely "Improved Land in Farms" and "Unimproved Land in Farms." There are doubtless wide variations in the classification under these titles, some returning as "Improved Land" only that actually under the plow, leaving a vast surface of much agricultural use to be noted as "Unimproved," or else including under the latter title wild lands which, not being "in farms" at all, ought not to have been so reported. The aggregates for all the States and Territories are:

Improved Land in Farms,.....	163,110,720 acres.
Unimproved Land in Farms,.....	244,101,818 do.
Total, ...	407,212,538

And it is scarcely possible that of land enclosed "*in farms*" there should be anything like the foregoing excess of what is wholly "unimproved" and useless. If we were to take the total under both heads, (407,212,538 acres in 1860,) for comparison with the corresponding figures in 1850, (293,560,614 acres,) the increase in the *total farm* area of the country would be 38¾ per cent. during the ten years. But we prefer to compare only the areas returned as "*Improved*," at the two periods, in which the rate of increase was considerably higher, in order that we may not seem to be stretching a point for the sake of reaching more favorable results:

Improved Land in the United States in 1860,	163,110,720 acres.
do. do. 1850,	113,032,614 do.
Rate of increase **44 1-3** *per cent.*,.....	50,078,106 acres.

Now the chief crops at the two dates, including with the cereals, peas, beans and potatoes, were—in bushels: Cereal Crops, etc.

	1860.	1850.
Wheat,.....	173,104,924	100,485,944
Rye, ...	21,101,380	14,188,813
Indian Corn, ...	838,792,740	592,071,104
Oats,.....	172,643,185	146,584,179
Peas and Beans,.....	15,061,995	9,219,901
Potatoes, ...	111,148,867	65,797,896
Barley,.....	15,825,898	5,167,015
Buckwheat, ...	17,571,818	8,956,912
Totals,.....	1,365,250,807	942,471,764

Rate of Increase **45** *per cent.* (nearly.)

Commercial Crops.

The chief crops under this head, (aside from cotton, which increased in about the same proportion—*i. e.*, was more than doubled in the ten years,) are the following, the products of which are given in pounds:

	1860.	1850.
Tobacco,.....	434,209,461	199,752,655
Hops, ...	10,991,996	3,497,029
Flax,.....	4,720,145	7,709,676
Totals, ...	449,921,602	210,959,360

Rate of Increase **113 1-4** *per cent.*

Value of Products of Market Gardens and Orchards.

	1860.	1850.
Market Gardens, ...	$16,159,498	$5,280,030
Orchards,..... ..	19,991,885	7,723,186
Totals,.....	$36,151,383	$13,003,216

Rate of Increase **178** *per cent.*

Animal Products and the Hay Crop.

The increase in the hay crop was from 13,838,642 tons in 1850 to 19,083,896 tons in 1860—an advance of 38 per cent., which although below the percentage of advance in "Improved Land" alone, compares favorably with that of the total surface included "in farms," the latter being 38¾ per cent. The value of animals slaughtered increased from $111,703,142 to $213,618,692, or a fraction more than 91 per cent. Dairy products and wool are the only items showing a comparative decline, the figures for these, in pounds, being:

	1860.	1850.
Butter,	459,681,372	313,345,306
Cheese,	103,663,927	105,535,893
Wool,	60,264,913	52,516,959
Totals,	623,610,212	471,398,158

The rate of increase here shown is only 32¼ per cent., it is true, but the very large increase in the value of "animals slaughtered" is probably more than enough to prove that this class of farm products has been fully sustained in proportion to the area farmed.

It is thus plainly evident, so far as the census returns may be depended upon for any deductions whatever, that the course of our agriculture during the decennial period ending in 1860, may be concisely described as follows:

1. Our population advanced 35½ per cent., but we increased the total area embraced in our farms 38¾ per cent., and the area strictly rated as "improved land," 44⅛ per cent.

This is notwithstanding the fact that during these ten years, our railroad, commercial and manufacturing interests extended with a wonderful rapidity, so that a larger proportion of the increase in population was engaged in those pursuits than in agriculture.

2. The means by which, in part, this has been accomplished, are indicated when we know that the value of agricultural implements and machinery increased 62⅓ per cent., or about *one-half more rapidly* than the area cultivated.

The total value of Farm Implements and machinery was returned at $151,587,638 in 1850, against $246,118,141 in 1860. But the returned "cash value of farms" had so much increased at the latter date, that while the farmer had $4.62 invested in implements in 1850 for every $100 invested in land, in 1860 the amount so invested was $3.70 only.

3. The production of the cereal crops *fully kept pace* in rate of increase with that in the area of *improved land.*

This is in accordance with the above table, in which however, a bushel of wheat only counts the same as a bushel of corn, oats or potatoes. The actual increase in the wheat crop alone was 72¼ per cent., while that in corn by itself was 41⅗ per cent., in oats 18 per cent., and in potatoes 69 per cent.

4. While fully maintaining our production of the cereals, we more than doubled that of the commercial crops above mentioned—increasing them about *two and a half times as rapidly* as the area of improved land.

The increase in tobacco culture in the New-England States for the ten years, was over 500 per cent.; in New-York it was from 80,000 pounds to 5¾ millions.

5. The diminished attention in some localities, to grain crops, is rather because there is now more time and labor devoted to Fruit and Market Gardens, than for the reason that "a scourging and exhaustive system of Agriculture" has been practiced until they can produce nothing at all.

The increase in the value of garden and orchard products is more than *four-fold* that in the area of improved land. This is one of the most striking features in the census returns of 1860.

6. Our total animal products, although we cannot arrive at the fact with entire definiteness, were undoubtedly quite as well sustained as our crops.

The very great expansion in the manufacture of cheese since the census of 1860 was taken, no longer assumes an abnormal appearance when we learn at how low an ebb this branch of farming was at that time—the production of 1860 having been actually less than that of 1850.

7. The reported "cash value of farms" in 1850 was $3,271,575,426, which would be at the rate of $29 per acre for the *improved land;* in 1860 it was $6,645,045,007, or at the rate of $40 per acre. The value of farming implements and machinery in 1860 was equal to $150 for every hundred acres of improved land, against $134 in 1850. The total value of live stock of all kinds was equal to $667 for every 100 acres of improved land in 1860, against $481 in 1850.

Mutton Sheep---Cardinal Points in their Management.

In accordance with my promise, made some time since, I now give you a short account of my management of sheep. My experience at the commencement, was anything but encouraging, from want of practical knowledge. My first great difficulty arose from the lessons I had so often heard repeated about the impropriety of keeping sheep, especially breeding ewes, too fat. Now the result was, that in trying to avoid this extreme, I fell into the other, and found to my cost, when my ewes commenced lambing, that they were quite too poor; consequently there were many losses—the ewes not having strength to produce their lambs properly, or nourishment to support them.

I maintain, that low condition, and the necessary accompaniment—the want of a sufficient flow of milk, is the principal cause of the abandonment on the part of the ewe, of her progeny—except occasionally with young ewes with their first lambs.

Finding that this system of low diet was not very satisfactory, I have since tried the other course, and find that sheep, like all other animals, require generous feeding, and will make ample return for it in the shape of mutton, wool, and last, though not least, satisfaction and profit.

The three cardinal points in the successful management of sheep, are *proper shelter, judicious feeding and kind treatment.* For shelter, my arrangements are simple and inexpensive, and as they answer a very good purpose, I will give a short description of them. They are rough sheds, enclosed on three sides, and open to the south, with yards attached, enclosed by high picket fences, to make them dog proof. At the back of each shed a board is hung on hinges, which can be raised and lowered as required for ventilation; this board or shutter is four or five feet from the ground, so that when open, there is no draft upon the sheep, but the current of air passes above them, keeping the pen free from all unpleasant effluvia. These shutters are nearly always kept open, except in stormy weather, when they are closed, to prevent rain or snow from blowing upon the sheep. Fresh air, with protection from storms, is absolutely necessary for the well-doing of sheep. The racks are so arranged that the hay is thrown into them from the loft above, which is much better than carrying it among the sheep; it disturbs them less, and their wool is kept cleaner. The pens should at all times be kept well littered; by attending to this, it will be found that

sheep will make a large quantity of very excellent manure, and at the same time be more comfortable and better for it.

To have the two latter points—*judicious feeding and kind treatment*—properly carried out, requires strict personal attention on the part of the owner; if left to the tender mercies of Patrick, something is very apt to go wrong.

Sheep if kindly treated become very tame and confiding; whenever I see them timid and wild on the approach of their keeper, I infer that their treatment is not as gentle as it should be. As to the exact amount of food to be given it is very difficult to state, so much depends on circumstances; of hay, they should have as much as they will eat nearly clean, three times a day. If too much is given, they will only pull it out of their racks and waste it. In clear cold weather they will require more than in damp mild weather.

My plan is to keep the ewes, lambs, and yearlings, in separate lots. I generally have twenty-five breeding ewes; they are kept in a pen about thirty feet square, rather more than half covered by shedding, the rest open yard, as above described. This gives them plenty of room, but not too much for heavy long, wooled sheep.

A few weeks before lambing, the ewes should have some grain, about a pint per head—more or less, according to condition—of oats, or corn and oats mixed. As they lamb, they should be separated from the flock and their feed increased, and if there are any roots on hand they would now come in very serviceably; too much attention cannot be given to seeing that they have plenty of fresh water at all times; salt should also be constantly within their reach.

At lambing time ewes require a great deal of attention, but to enter upon this subject would require too much space for this communication.

About the first of August the lambs are weaned, to enable the ewes to recruit somewhat before the buck is turned among them—which is done in the latter part of September. By this means the lambs come about the first of March, which I prefer to having them come latter, always having found that early lambs do better than late ones. The ewes should be put upon poor pasture, for a few days after being separated from their lambs, to check the flow of milk; this precaution may prevent injury to their udders.

The lambs, on the contrary, should have the best pasture—a recently laid down field with a good deal of clover, I prefer; and as soon as the grass begins to fail in the fall, I give them, and my other sheep as well, a little hay in the evening when they are driven to their folds, which prevents them from losing condition before they are taken into winter quarters.

It is very essential if good sheep are desired, that the lambs should be well cared for the first winter; this is the period that to a very great extent makes the sheep, and no after attention will compensate for neglect at this time. My lambs get a small quantity of oats during the fall, merely to get them accustomed to eating them; the quantity is gradually increased to about a half a pint each by the time the grass fails, after which they are fed a pint each, of a mixture of oats and corn—in the proportion of three parts of oats to one of corn—with as much hay as they will consume; an occasional feed of mangel wurtzel is also given, which they should receive daily with their grain, if I had them in sufficient quantity. I am fully convinced that to produce the best results in sheep husbandry, roots are absolutely essential, and for this purpose I prefer mangel wurtzels or Swedish turnips.

Lambs will make decidedly better growth, and keep in healthier condition, if fed a liberal quantity of roots with their allowance of grain and hay, and will bear confinement in airy sheds without injury. But if they don't get vegetable roots in their folds, they had better have an occasional run in the fields to get grass roots, (for grass there is none in winter.) With the above treatment, my lambs are perfectly healthy—making rapid growth, and shearing from ten to thirteen pounds of wool each. They are not put with the flock of breeding ewes till they are about eighteen months old; by this means they do not produce lambs until they have nearly or quite attained the age of two years. They are then sufficiently matured to bring forth in their turn, good strong lambs, without injury to themselves. This is not the case when they are permitted to lamb at an earlier period.

The yearling wethers, with the culls of the ewes, are fed during the winter so as to be ready for market in February, at which time they usually command the highest price. The yearling wethers average about one hundred and fifty pounds, and some of the best of the ewes reach nearly two hundred.

Edgewood, Westchester Co., Pa. C. E. H.

CURE FOR RINGBONE.

In the Co. GENT. of March 30, Mr. J. H. FOSTER inquires how to cure *ring-bones* on horses. I will tell him him how to do it when they are not past cure.

1st. On the ring-boned foot, have a shoe with high heel corks and little or no fore cork. This is to prevent a pressure of the excrescence on the hoof.

2d. Use something which will cause the excrescence to be absorbed and carried off. The excrescence is caused by a derangement of the vessels secreted there, and if overcome it must be absorbed and carried off, and this too before it becomes a sort of cartilage or bony substance, and perfectly formed. To do this blistering is resorted to, but I will recommend a better and surer way, viz, make a compound as follows:

Tincture Iodine,	1	ounce.
do. Capsicum,	1	do.
do. Camphor, *strong*,	1	do.
Oil thyme,	1	do.
Alcohol,	4	do.

Mix and apply this to the ring-bone three times each day, and at the same time give the ring-bone a severe rubbing. Then cover it with a woolen cloth closely, two or three thicknesses.

In a short time the excrescence will begin to grow smaller, and finally disappear—that is, unless it is past cure. There will be no difficulty in obtaining all the articles mentioned, except the *oil thyme*—that will be found difficult to obtain. The writer has never been able to find a pure article, except from importers of French drugs. It is commonly understood to be the oil of origanum, *but it is not*, and is as far from it as the oil of hemlock.

This compound will not always cure, for ring-bone is sometimes past cure. There is little danger of hurt arising from the use of this medicine, although it may take off the hair, and sometimes produce a sore. The writer of this has known it to be used in many cases, and never has heard of but one instance where an excessive sore was made, and that was in a case where other ingredients were added. J. J. F.

Hamilton, N. Y.

Manure the Farmer's Capital.—I would suggest, what has often been maintained before, that "manure is the farmer's capital," and that all of it which is so frequently wasted around the privies, the barn-yards, hog-pens, &c., be saved, and judiciously applied to the orchards, gardens and farms, and a great increase of wealth, health and happiness, would result therefrom to the people of this country. JOHN R. BLAIR.

Growing Clover---Is there Danger of its being Overdone?

MESSRS. EDITORS—I have been waiting for some response to your inquiry, in regard to how long clover may be grown in Western New-York. You state, (last vol., page 48,) "about Syracuse, where it has been long grown, and so far as we are aware, on the wheat lands in the western counties generally, clover sickness is as yet unknown. If we are wrong, we would be glad to be informed if any symptoms of the kind have made their appearance." Now I have hoped and expected that if any signs of "clover sickness," or of any kind of failure in clover, had appeared in this part of the State, or in the wheat-growing sections of the Western States, that it would have been reported for your columns. For as clover is considered of great and increasing importance in this part of the State, I can but believe that if any symptoms of failure had been observed that we should have heard something about it.

I have resided in this county something over twenty years, and beginning with the year 1847, I have constantly taken and read an agricultural paper,—first the Genesee Farmer, and then the Rural New-Yorker, both published in Rochester, the centre of one of the best wheat-growing sections of the United States, and where clover is probably more largely and generally grown than in any other section of the country,—and to the best of my recollection I have never heard or read of any land becoming "clover sick," or refusing to grow clover, where the crop could be said to have anything like a fair chance. On most of this land clover has been grown more or less from 40 to 60 years, and on some considerable portions the main crops have been wheat and clover, grown alternately, —the clover being sown on the wheat, and then the next year plowed under, and the land again sown to wheat, to be again followed with clover; thus sowing clover three times in six years, instead of twice, as I recommended, and instead of injuring the land, making it "clover sick," or causing any difficulty or trouble of any kind, the invariable effect has been, that wherever the most clover has been grown the land has been in the best condition. And instead of there being the least evidence that there is any danger that there may be too much clover raised, there is abundant proof on every hand, that there is the greatest need of increasing many fold the amount grown.

Consequently it will be seen that your Prussian correspondent's "contradiction," (last vol., page 41) cannot apply here. But by referring to L.'s article it will be seen that he does not oppose "seeding twice in a six years' rotation," because it should not be done, but because, as he argues, it cannot be done, or as he says: "In all Germany we have no land that will bear it." Hence he says: "If it can be done, if the land will bear it, why then I should fully agree and highly congratulate Mr. F. on owning such land." Now in answer to this I believe I am fully justified in saying that from anything we know or can learn to the contrary, we have here in western New-York, and perhaps some of the best wheat sections west of here, just such land. And though we may not be able to tell to a certainty what we may expect in future, the fact that clover can be grown so much easier, cheaper and better here than in England or Germany—that our soil and climate seem to be so much better adapted to its cultivation, would certainly seem to show that there is very little if any danger of raising too much of it. In fact, judging from the experience of our farmers thus far in growing clover, the only limit to the amount that may be profitably grown, if in alternation with other crops, will be found when the land, by growing clover, and the application of barnyard manure, has been made as rich as is desirable for wheat, when to make the land richer would be as likely to damage the crop by badly lodging as it would be to improve the yield of grain.

And I wish to have it distinctly understood that in advocating the growing of more clover I am not going on the one idea principle of improving land solely by plowing in clover. But on the contrary, one of the principle objects in view in advocating the growing of a great deal larger and more frequent crops of clover is to have a great deal more clover hay to feed, in order to make more and better manure, being strong in the belief that to continue the growing of a large amount of clover with the making of a large amount of rich manure, is not only the easiest, cheapest and best course the American grain-growing farmer can take to improve and enrich his farm, but vastly better than it would be to depend solely on either manure or growing and plowing in clover.

But admitting the time may come when our land may refuse to grow clover, if it is sown too often, when we can only be sure of a good crop by sowing but once in a period of six, eight or ten years, yet the fact that long before the land will be brought to this condition, or become "clover sick," it may be brought to a high state of fertility—that by the frequent growing and feeding of heavy crops of clover, the land may be put in an excellent condition to produce any other crop—would seem to be an abundantly sufficient reason for growing clover until the land becomes as rich as may be desirable. For with a rich productive soil, there are plenty of other forage crops that may be grown for the use of the farm, until the land has become sufficiently rested to again produce clover.

But, instead of there being the least danger of growing too much clover, the reasons and facts brought out during the discussion of this subject in your columns, incontestibly proves that the farmers of the wheat-growing sections of the Northern and Western States, cannot do better than to largely increase the amount of clover grown on their farms. And, in view of the large amount of land that is not only not improving, but is being more or less run down, as it is more or less farmed on the skinning system, and also in view of the fact that there are considerable sections of country that formerly produced good crops of wheat, that have long since failed to do so; and that there is too much reason to fear that this may be the case in regard to much, if not the most of our wheat lands—I say in view of these facts, it seems to me that I cannot too strongly urge all wheat-growing farmers whose lands are not in a condition to produce heavy crops, to largely increase the amount of clover grown and fed on their farms. F.

Orleans Co., N. Y., 1865.

THE CORNELL UNIVERSITY.

The Act which has passed the Senate of this State, and is we believe now pending in the Assembly, to establish the "Cornell University," and to appropriate to it the income arising from the Congressional land grant, is in reality the *acceptance*, rather than the donation, of a magnificent trust, on the part of the State. Its provisions are based upon the preliminary condition that "within six months from the passage of this act, the said corporation possesses a fund of *five hundred thousand dollars at least*, given by the Hon. EZRA CORNELL of Ithaca"—to be given inalienably and absolutely, for the purposes and behoof of the institution. This most liberal offer on the part of Mr. Cornell, hinges only upon the appropriation by the State, of the Land Fund granted by Congress expressly for such appropriation. The income of that fund has been heretofore made payable to the "People's College," at Havana, indeed, but under certain conditions and restrictions which are understood not to have been complied with. If such is the case, the Legislature seem to be perfectly at liberty to resume the disposition of the fund, and not only at liberty but under actual obligations to place it where there may be some hope of realizing from its use the advantages designed.

The friends of the People's College, however, having expressed the desire that a farther opportunity should be given to avail themselves of this fund, as appropriated to that college in 1863, the present act is made wholly inoperative—provided the money shall be forthcoming on their part within three months, sufficient to enable its trustees to comply with the law of two years ago, and provided its buildings, grounds, &c., are shown to be held by a clear and unencumbered title. If there is any doubt, therefore, of the entire legitimacy of such action on the part of the State, as should re-appropriate the land fund, on account of the terms of the former appropriation not having been met,—that doubt must be wholly removed by the ample grace accorded to the People's College, (if its trustees are really in earnest in their hopes of yet going on with the undertaking,) to make up for lost time, and apply themselves to the task in hand. Should they do so, we must hope the best results from their future endeavors, as at least a partial recompense for the loss to the State of Mr. Cornell's munificent gift. Should they fail to do so, on the contrary, the bill makes every provision for immediately organizing the "Cornell University," and that institution, without awaiting the sale and investment of the Congressional lands, will go to work at once under the capital furnished by its principal founder.

It seems proper and right to characterize the act before us as the acceptance and not the giving of a favor by the State. The institution growing out of the Cornell donation is to be put in operation satisfactorily to the "Regents of the University," and to be subject to their visitation. The governor, lieut.-governor, speaker of the assembly and superintendent of public instruction, are to be trustees *ex-officiis*. But, more than any real or nominal share in its management through these officers, the people of the State are to derive a direct benefit in the free education of one student from each assembly district, annually admitted for the full course; or, as that course will probably be of four years, this provides for the constant gratuitous tuition of no less than *five hundred pupils* from all parts of the State, provided only that all the assembly districts avail themselves of the privileges of the law. In this way not only the influence of the education received is diffused throughout the whole community, but the graduates will be prepared in their several localities to undertake and carry out any experiments which may be committed to their charge, and to advance as they may be able the preparatory studies of those desiring to enter the College.

The object of the corporation to be known as the "Cornell University," is stated in general terms to be "the cultivation of the arts and sciences and of literature, and the instruction in agriculture, the mechanic arts and military tactics, and in all knowledge;" but its *leading end* is afterward more specifically stated as being "to teach such branches of learning as relate to agriculture and the mechanic arts, including military tactics"—which is, in other words, the precise object for the promotion of which the grant of public lands was made by Congress. Under these circumstances,—with the liberal provision for free students,—with the proffered fund, unprecedentedly large, we presume, as a tender from a single citizen under similar circumstances,—and with the extreme care shown in drawing up the bill, to meet all that the People's College can fairly claim, in a fair and considerate spirit,—we cannot think that members of the Legislature will be willing, advisedly, to incur the responsibility before their constituents, of permitting the bill to fail. It is with undisguised hesitation that we ever refer to laws pending the action of our legislators, but when a measure appears so clearly to meet the views and the wants of those best informed on the subject, as well as of the great body of the farmers of the State, it is no more than a matter of duty to give expression to these sentiments, and to express the confident hope that they will not be disregarded.

A GOOD SHEEP RACK.

MESSRS. L. TUCKER & SON—I am so well pleased with a rack for feeding hay and grain to sheep, that I have been using this winter, I cannot forbear sending you a description of it. Anything that in these days of high prices enables a farmer to save both hay and grain, is a valuable improvement, and this rack I speak of does both. It is called Ralnston's combined rack and trough. It effectually prevents the sheep from pulling and treading under foot the hay, as they will do in the ordinary rack used; and there being a separate place for each sheep to feed in, prevents the strong from crowding out the weaker ones, especially when feeding their grain.

Its simplicity enables any one who can use tools to make it, the amount of lumber required to make a rack 16 feet long, being about 85 feet.

I do not know how to describe it better than to say it consists of a trough with a slatted cover fastened to it by hinges, and a railing framed on to this cover to prevent the sheep from jumping across. To fill the rack you throw back the cover, put in the hay or grain, and then turn the cover to its place again, when the sheep eat between the slats. I believe its use this winter will save me more than hay enough to pay for the cost. Any information about these racks may be obtained from C. G. Alderman of this place.

Aurora, N. Y. TALLMD. DELAFIELD.

SYRUP AND SUGAR FROM SORGHUM.

MESSRS. L. TUCKER & SON—In the COUNTRY GENTLEMAN of Jan. 26th there is an article on Sugar Cane, by R. L. Sharp, in which he makes the following inquiries: "What is the best mode of planting and cultivating, and the best mode of taking off the blades; also if there is any way of constructing flues, so as to take less fuel, or any mode of planting, cultivating or evaporating so as to produce sugar in quantities to pay?"

For seven years I have made cane growing a speciality, and have experimented much on the points raised by Mr. Sharp. My conclusions are—1st. Plant in rows 4 feet apart, north and south, with hills 20 to 24 inches apart in the rows. 2d. On second hoeing leave only from 4 to 6 of the best canes in a hill and never pull off the suckers. 3d. The ground should be thoroughly worked with cultivator and hoe till the cane is knee high, and thereafter the weeds kept out with the hoe. The last time going through with a horse I prefer a small plow, and turn the furrows to the row. Late plowing through cane is not advisable; though it may increase the size of the cane, it *does not* add to its saccharine value, but it *does* delay its ripening, and especially is this the case if you cut the roots. 4th. Stripping or blading the cane has been, and now is, one of the great drawbacks of cane growing. The hand stripping mentioned by Mr. Sharp is very tedious, as well as expensive. A very simple arrangement which I devised will enable a man to strip from one to two acres per day with ease—I have used it five years—viz: Go into the wood and cut a three pronged stick, the prongs starting out near each other, and not very flaring. A little trimming gives you a *stripper* that will do good service, and if the prongs come out right, you can perform the labor with it I have mentioned. In the absence of woods a little labor and skill will put together sticks that will answer the purpose better; if made of iron, it would be no worse. 5th. One cord of good wood ought to boil down 150 gallons of syrup, and will do it, with a properly constructed arch and pan. Something must have been very defective either in Mr. Sharp's pan or arch, or both, to require a cord of wood for 40 gallons. 6th. Sugar *can be made from cane so as to pay.*

Cane, like every other vegetable, is improved in quality by cultivation. After cultivation the secret of sugar making lies in three, or rather in four things, viz: 1st. Proper clarification. 2d. Rapid evaporation. 3d. Mode of finishing off. 4th. The condition of granulation. The juice should be thoroughly clarified at as early a stage as possible; afterwards *boiled down* as *rapidly* as possible. From the siruping or evaporating apartment the sirup should pass at once into a finishing or sugaring-off apartment, so arranged that the heat can be guaged at pleasure. Intense heat at this stage of operation seems to *melt the crystals*, rendering crystalization thereafter impossible, or nearly so. The mass should be removed from the fire at the proper time—that is, it should not be too thick, nor too thin—and without scorching. A density of 12½ pounds to the gallon is the nearest point by weight I can give for sugar.

When removed from the fire it should be put into an open barrel, while yet warm, and kept in a warm place, stirring occasionally. If granulation does not begin within a very few days, stir in a little sugar. It will form a nucleus, around which the grains will cluster and sink to the bottom. By this process from one-third to two-thirds will become sugar. The evaporator I have used with the best results is called the "Eureka" sugar pan. It has the most perfect arrangements for clarifying and sugaring down of any pan I have ever seen. A firm in this city have arranged to manufacture it.

Jackson, Mich. J. R. WEBB.

SORGHUM IN MARYLAND

I have seen from various parts of the country, communications in the papers, from persons engaged in the cultivation and manufacture of Sorghum cane, and as we have been somewhat largely engaged in manufacturing syrup here, I thought a short account of our works might not prove uninteresting to your readers. The mill at this place belongs to my employer, Mr. H. B. Slaughter, a gentleman well known in this State as a large steamboat owner, and as the pioneer in the business of packing fruit in hermetically sealed cans. He is still largely engaged in this business, and employs an immense number of hands during the fruit season. The mill used here for crushing cane is a horizontal one manufactured in Baltimore, by a firm which has been long engaged in making them for the West India market. The power of this mill can be judged from the fact that each of the three horizontal rollers weighs 1,500 pounds. During the past season this mill was driven by one of Page's portable engines of eight horse-power, but it was found to be totally inadequate to drive it to its full capacity, and we have purchased an engine of thirty horse-power for the next season. The quantity made last fall was somewhat over 7,000 gallons. With our new engine a much greater quantity will be made in the same time. We used two of Cook's plantation pans, 15 by 4 feet. The quality of the syrup made is considered by competent judges, as superior to any other made in this section. We consider Cook's Evaporator superior to any other, and intend adding several more of them the coming season. With our increased facilities we expect to make at least 20,000 gallons the next season. The yield varied considerably last fall; some lots of cane did not pay for working, owing to its being mixed with broom corn. The largest yields were from one lot of one-quarter acre, 73 gallons; a lot of half an acre, 101½ gallons, and a lot of one-sixth of an acre, 31 gallons. These yields are as large if not larger than any I have seen reported. The first was from a piece of black, sandy, swamp land, the second from high sandy land, and the third from red clay. Mr Slaughter, with his usual enterprize, has ordered a lot of pure seed direct from China, which he hopes to have in time for the spring planting; (none of this seed will be for sale, except to the patrons of this mill—this will prevent inquiries.) Why do not the syrup makers of this country unite in petitioning Congress to abolish the tax on Sorghum? It is a growing interest, and should be nurtured until it is out of its infancy, before being taxed. Should it be agreeable, I will take pleasure in penning an occasional article from this section, which is fast becoming the fruit garden of the Eastern States. W. F. MASSEY.

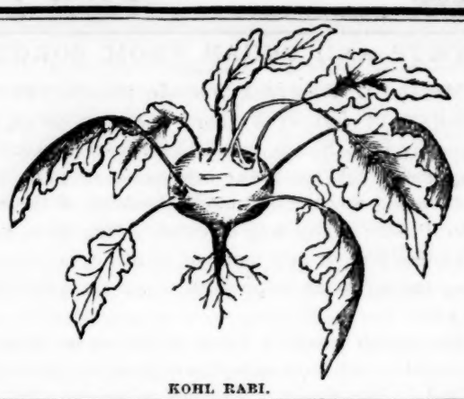
Queen Anne's County, Md.

EXPERIMENTS WITH KOHL RABI.

MESSRS. EDITORS—It has been claimed by the advocates of the agricultural department of the Patent Office, that the seed of the above named vegetable was first introduced into this country through its agency, and that its introduction was going to be of great benefit to the country in general, and farmers in particular. I doubt whether it was first introduced by the department, but it has evidently been widely distributed by it, and it would seem to be no more than fair and honorable that the recipients of its favors should publish their success with the seed, so that those who are not so fortunate as to have their garden seed furnished them at the public expense, may at least receive a little information as to the value of new things, especially as we all have to pay our proportion of the public taxes by which the institution is supported. But I find, as far as my acquaintance extends, very few persons who receive their garden seed in this way, or who receive the agricultural reports of the department, take the trouble and expense to take an agricultural paper; they therefore cannot be expected to communicate the result of their investigations and experiments, if they make any, to papers they do not read. Perhaps when the department gets the new monthly report, which I see by a late number of the COUNTRY GENTLEMAN, is to be a regular agricultural periodical, well established, the receivers of its favors will furnish it occasionally with an original communication, so it will not be entirely dependent upon clippings from the agricultural press for its matter of fact, as the Agricultural Report of the Patent Office notoriously was a few years ago.

Wishing to refresh my memory as to what has been published in regard to the kohl rabi in the COUNTRY GENTLEMAN, since it was first introduced to public notice, I have been looking over the volumes, but I do not find much information given about it. It is noticed in only half a dozen volumes out of twenty-four, and these are mostly short ones, or inquiries about it. The few editorial remarks in the number for March 4th, 1858, contain more practical information than any other article. The communication of A. R. A., in the number for May 3d, 1860, contains many good suggestions, and urges those who have cultivated it to publish the result of their experience. In compliance with the wishes of A. R. A., and my own inclination, I will give the readers of the COUNTRY GENTLEMAN my own experience with it, and hope others will do the same.

In the spring of 1859, a physician, who came from Germany a few years before, and had settled in this place, brought a small package of the seed to me and wanted me to start them for him in my green house, as he could not get them to grow early enough in the open air. He spoke very highly of the plants as furnishing an early vegetable in the first part of summer, and said what were not used then could be allowed to grow till fall to feed cattle with. I sowed the seed and it came up well and grew finely. As the Doctor did not want all the plants, I took those left and transplanted them into the garden at the same time I did cabbage plants, and cultivated them in the same way. Late in the summer, when they had got to be 5 or 6 inches in diameter, we had some of the bulbs cooked for the table, but they were not very well liked, so the rest were suffered to grow till fall. A short time before they were harvested some eight or ten of my neighbor's cows and oxen broke into my root patch, and after tasting of a number of varieties of cabbages and turnips, got hold of the kohl rabi and devoured a



KOHL RABI.

number of them before being discovered at the mischief. They gave very decided proof of their choice, for they left all the cabbages and turnips and employed their time wholly in investigating the merits of what, to them, was very evidently new and very good. I had enough left to harvest with the cabbages and turnips and put into the root cellar under my barn, and feed to my cows at different times through the winter. I found my own cows liked them as well as my neighbor's, preferring them at all times to any other root or vegetable. I also found they kept better than any other vegetable, so that I kept a few to the first of June, and they appeared to be about as good as at any time before.

In regard to their use as a culinary vegetable, the Doctor told me afterwards that I did not try them early enough, and he said they should be planted into very rich ground, so they would grow quick, and then used very early in the summer, before they were half grown. The soil in which the bulbs were grown was not very rich, but the produce was as large as with ruta bagas grown on the adjoining ground of the same quality.

This was my first experiment in growing the kohl rabi, and I was very well pleased with the result, so that if I could have obtained seed, I should have planted it the next year, but the seed could not be had; so to make sure for another year I set out half a dozen of the best bulbs that had the roots left on them when they were harvested, in the spring; all but one of them grew and produced an abundance of seed. As the kohl rabi is said to be a hybrid plant, I did not feel quite sure that the seed would produce kohls; it might produce cabbages or turnips, or a mixture of all three. However, I planted it the next year, and it proved to be good seed, true to its kind, and I raised a good crop of bulbs from it. I did not see but that they were as good as those raised the year before from the seed from Germany. Since that time I have continued to raise them every year, and I think I shall continue to raise them so long as the seed can be obtained. I think they can be raised, taking all things into consideration, much more cheaply and easily than any other root or vegetable generally used for feeding stock.

In order to grow a large crop, the seed should be sowed very early in the spring, as early as a seed-bed can be prepared for the seed. It is best to sow the seed in drills, so the plants can be hoed and kept free from weeds till they get to be 5 or 6 inches high, when they are ready to be transplanted, the same as cabbage plants; but care must be taken not to plant them but very little deeper than they stood in the seed bed, for the bulbs form just at the top of the stem where the leaves branch out, so this part must be kept well above the ground both at planting and when hoeing them in the summer. If the plants are set in good, heavy, well-manured soil, and kept well cultivated with the horse hoe or cultivator through the summer, they will produce as largely as ruta bagas or mangolds, and they can be harvested with very much less labor than any other root. They can remain in

the ground till very late in the fall, even till it freezes up, as in gathering them they are cut off between the the bulb and the ground with a stout sharp hoe, then collected together, and after pulling the few remaining leaves from them, stored in a cool, dry cellar, where they will keep in good condition till the following June. As there is no dirt gathered with them as with all other roots, they can be kept as clean and nice as apples.

I have raised the khol rabi in the same way I do ruta bagas, by planting the seed where the bulbs are to grow the last of May or the first of June, but so large crops cannot be got in this way as by sowing very early in a seed bed, and then transplanting. The plants transplanted early in June will make the largest crops, but a part of the plants can remain in the seed-bed and be transplanted in July after an early crop of peas, or some other early vegetable, has been taken from the ground; in this way two larger crops can be obtained from the same ground than in any other way.

Fearing that seed raised a second time from the bulbs might begin to deteriorate, last year I thought it best to obtain some new, and seeing by the catalogues of Mr. Bliss of Springfield, Mass., and Mr. Vick of Rochester, N. Y., that they had it for sale, I sent by mail and procured some from both places, which proved to be good. No doubt it can be obtained of them at the present time, and also of other large dealers in seed, whose advertisements can be found in the columns of the Co. GENT.

After half a dozen years' experience with the kohl rabi, I am of the opinion it is the *very plant adapted to the climate of New-England*, and that it will, before many years, be more largely cultivated than any other, excepting Indian corn, for feeding stock. I think it has many advantages over all other roots, bulbs or tubers, not the least of which is its power of withstanding our scorching drouths. In England it is called *the bulb of dry summers*, and is said to endure the drouth better than any other root. I think that will be found to be the case in our own country. In the very severe drouth of last summer I did not see as my plants suffered in the least. In regard to its many good qualities, I am fully of the opinion of the author of the Book of the Farm, and there is no better authority. He says: "Specimens of the kohl rabi have been raised in Scotland weighing from 5 to 7½ pounds each; in Ireland individual bulbs have attained the weight of 14 pounds, and in England they commonly reach from 8 to 10 pounds. It is an excellent food for cows and horses, and when boiled with grain for their use, will afford them true nourishment. The leaves may also be used, having entirely the character of a true cabbage; they should be removed with a sparing hand, else the enlargement of the bulb will be prevented." The advantages which it is said to possess over Swedish turnips by those who have cultivated it in England and Ireland are these: "Cattle, and especially horses, are fonder of it; the leaves are better food; it bears transplanting better than any other root; insects do not injure it; drouth does not prevent its growth; it stores quite as well, or better; it stands the winter better; and it affords food later in the season, even in June."

As to removing the leaves, as alluded to in the above extract, if they are not taken off too early, it will not prevent the enlargement of the bulb, for the first formed leaves or those on the lower part of the bulb, drop off themselves when the bulb gets to be pretty well grown, and new leaves are continually forming at the crown of the bulb to continue the enlarging of the bulb. As soon as the lower leaves begin to turn yellow they will come off very easy, and if taken off then, it will not damage the bulb, and cattle are very fond of them, and they afford a large amount of fodder in this way.

Now if there is any Yankee farmer so lazy and shiftless as to wish for more advantages than this plant affords, he can obtain one more; by sending to the Commissioner of Agriculture, he can perhaps obtain the seed free, and while he is about it he may as well send for a man to bring the seed to him, and plant it and do the cultivating for him. I do not see why Congress has not the same right to make a law for this purpose as to establish an eleemosynary institution for the distribution of garden seed, or set up an agricultural periodical.

Concord, N. H. A. C.

HAY SWEEP

I received from you not long ago, a number containing a cut and description of the hay drag. It is a subject of deep interest to me as I cut 200 acres of meadow, and house the whole in hay-house, where it is baled for export. We have been in the habit of first shocking and then dragging the shocks by horse and rope—some of them more than half a mile. Labor is becoming very scarce with us, and if I can get rid of the heavy labor of shocking, and the drag works well and does not waste hay on its route, I will have gained a very great point. This consideration emboldens me to ask you the following questions:—1. Have you seen the machine in actual operation?—2. Is it necessary to *bunch* the hay by the ordinary hay-rake, or simply to throw it by the rake into winrows?—3. Will it haul without loss the distance of half a mile on good ground?—4. Could not the machine be increased in size so as to use four horses or oxen, and how could they be attached, and would it be advantageous to do so?—5. Does it take up the winrows perfectly clean, or has the rake again to be used to clean up?

Frankfort, Ky. M. B.

1. We have seen this machine in very successful operation. It was invented many years ago, and used extensively, by WM. R. SMITH, of Macedon, N. Y., but was never patented.—2 and 3. It works better in the unbunched winrow than in any other way, and takes up the hay as clean, or nearly so, as a common horse-rake, and will draw any distance on smooth ground. 4. The machine might doubtless be made larger, but it would probably be more cumbersome, and possibly difficult to manage on uneven ground. Two horses will draw a large quantity, and two boys, old enough to ride and guide, will manage it without any difficulty.

"PLOWING WEEDY STUBBLE, &c."

MESSRS. EDITORS—In your No. of the 16th inst., I see an inquiry under the above heading, as to the best manner of treating a weedy stubble. My plan is to set the mowing machine to work in the fall while the weeds are in blossom, and thus destroy the seed. If I had a field like the one in question, I should burn it if possible, as the ashes would act more immediately on the succeeding crop. After burning take a Kelsey harrow if you have one—if not get one—and harrow the field twice, and then roll it, and this will cause all the seeds to vegetate, and effectually destroy all the seed that lay on the surface. Then set the plow to work and turn the whole under, and thus put to rest all the trash that would otherwise accrue from the crop of weeds. In fact I should have but little fears but that the seed would all vegetate though not harrowed, as most seed will vegetate under the influence of a spring sun, and that too before it may be necessary to plow the field for corn. JOHN KELSEY.

Prospect Farm, near Yardleyville, Pa.

CHICAGO GRAIN MARKET.

As probably the greatest primary grain market in the world, the city of Chicago, and the business there transacted, possess an interest which will warrant our reviewing very briefly a pamphlet just issued trom the office of the Tribune of that city, containing he statistics of its commerce for the past year. In the outset we may copy the following tables of the receipts of flour and grain for four years past, both because it illustrates the comparative crops of those years, throughout the great West, and because, in the language of the pamphlet, it proves that "notwithstanding the drain which has been made on us for men and means, agricultural pursuits have been pushed forward with redoubled energy and vigor, and now a much greater breadth of land is under cultivation, in the fourth year of the war, than was before known in the history of the country."

TOTAL RECEIPTS OF FLOUR AND GRAIN FOR FOUR YEARS.

	1861.	1862.	1863.	1864.
Wheat, bush.,	17,539,909	13,728,116	11,180,344	11,257,196
Corn, bush.,	26,543,223	29,449,328	25,459,508	13,623,087
Oats, bush.,	1,883,258	4,138,722	9,139,525	13,653,914
Rye, bush.,	479,005	1,038,825	8,69760	969,116
Barley, bush.,	417,129	872,053	1,098,346	740,446
Total,	46,862,534	49,227,044	48,708,483	40,243,786
Add flour in wheat,	7,230,865	8,331,953	7,371,420	5,708,955
Total,	54,093,219	57,558,999	56,079,903	45,952,741

Readers will not need to be reminded of the memorable frosts of 1863, which rendered the Indian corn crop of that year so nearly an entire failure—a failure due to season alone, and which accounts for the fact that the receipts of this grain in 1864 were only about one-half the average of the three preceding years. While the wheat crop of 1860, as shown above in the receipts for 1861, has never since been fully equalled, this is owing, at least in part, to the war demand for oats having given a constantly increasing impulse to the culture of the latter grain. And but for the frosts of 1863, as affecting the corn crop, the receipts of all kinds at Chicago in 1864, would have undoubtedly presented an aggregate fully equal, if not considerably superior to that of any preceding twelvemonth in her history.

In addition to dealing in the wheat and flour grown or manufactured elsewhere, Chicago is a more important milling point than many are aware. Eleven establishments turned out 255,000 barrels of flour in 1864, which is slightly above the average amount of the four preceding years.

The progress of the live stock trade of Chicago during the past four years, is shown in the following figures:—

	Hogs.		Beeves.	
Year.	Received.	Shipped.	Received.	Shipped.
1861,	675,002	280,094	204,579	124,146
1862,	1,384,890	491,135	209,655	132,745
1863,	1,900,519	810,453	298,381	293,217
1864,	1,582,047	701,854	336,627	179,520

Considering the failure of the corn crop, the hog product has been sustained perhaps better than might have been anticipated. As to beeves, "the fact has never been so apparent as during the year now closed, that Chicago is rapidly becoming the great centre of the Northwest for supplying the increasing wants of the entire country. The markets formerly chiefly supplied from Ohio and Indiana—as Philadelphia, Baltimore, New-York, Brighton, Cambridge, and Albany—are now depending principally upon Chicago for the best beef; and the Canadians regard the Illinois beef as the best they can procure."

The number of beeves packed at Chicago in 1863–64 was about 70,000, and for the season just past probably considerably larger. The number of hogs packed in 1863–64 was 904,658.

As to sheep, the report before us remarks:

"One very important feature in its relation to the future of our Northwestern States for the supply of Wool, is the immense numbers of sheep which have gone from this market to stock the rich grazing lands of the Northwest. We only regret that there are no statistics from which we could give the numbers that have been thus furnished. During the month of August upwards of 40,000 head were sent westward from this market, consisting chiefly of the best breeds for supplying the choicest descriptions of Wool. It will be under-estimating the numbers of stock sheep thus forwarded westward as being upwards of 100,000 head during the past year."

Those who are interested in arriving at an estimate of the probable future prices of Wool, should not overlook, as an important element in the calculation, the increase in the flocks to be shorn next season, as compared with former years, of which the foregoing furnishes some indication.

Chicago is a very important market for Seeds—both Grass and Flax. The former are mostly shipped to the East, but large quantities of linseed oil are made, and the business in that and in oil-cake is of much extent.

After many tables of statistics, from which the foregoing is but a meager abstract, this report remarks, that the figures given, large as they are, must be taken with the recollection that as yet "but 15,000,000 of the 35,000,000 of acres in Illinois, 8,000,000 of the 50,000,000 of acres in Iowa, 8,000,000 of the 50,000,000 of acres in Wisconsin, 3,000,000 of the 40,000,000 of acres in Minnesota, 3,000,000 of the 37,000,000 of acres in Missouri, and not more than 2,000,000 of the hundreds of millions of acres in the vast territory west of the Missouri river, are under cultivation." One can hardly appreciate the almost boundless resources indicated by these statements, or over-rate the importance to our prosperity as a country, of the wonderful improvements in mechanical art, by which these resources are rendered available.

Cashmere or Angora Hair.

I have just received from the factory, three blankets—beautiful, white, soft and fine, made from Cashmere hair and Spanish Merino wool, worked on the usual machinery of a woolen factory. All who have seen the blankets are perfectly satisfied that for such use the goats are an important animal—in short, a rival of Merino sheep. These blankets have proved more satisfactory than I anticipated. I shall have some more made this season. The manufacturer of these is R. Playford Cook, of Cook's Mills.

I will now give his statement as rendered to me, viz., six pounds of hair and six pounds of wool was left with him, from which he made seven and a half yards of blankets, two yards wide—spun 11¼ cuts to pound, the yarn extremely strong, and that the blankets will last 50 years. I paid him six dollars for making and finishing. I very much regret that I did not leave more with him, as we much prefer these to all wool.

JOHN S. GOE.

Near Brownsville, Pa.

Fruit-Growing and Wine-Making in California.

SAN FRANCISCO, Feb. 10, 1865.

MESSRS. L. TUCKER & SON—The road on our return to the village, through miles of vines, wound most gracefully around the inequalities of the ground at the base of the hills, as graceful as through any lawn; and our return was marked by the same unalloyed pleasure as our starting, leaving only pleasurable impressions. One of the most marked features in the cultivation of fruits throughout the State, is the *thorough cultivation they receive*, being kept entirely and absolutely *free of all weeds, and the surface soil receiving the most thorough cultivation.* This is one of the most beautiful and attractive features of the country. I have not in a single instance seen an orchard neglected and grown up to weeds and grass, hogs and cattle browsing and feeding on roots and branches, here one broken off, there another dead, most dying, none thriving, those not dead struggling for existence amid grass, sod and weeds, and suckers permitted to sap what is left, or the trees overshadowed by a corn crop, where the plow will tear the roots and the whiffletrees girdle the trunk with deadly wounds. Planted as trees usually are at the East, and cared for as they are there, it is no wonder that they fruit so late, and so little. The only wonder is their fruiting at all. The orchard trees here are thickly planted, with a view, I presume to thinning out, but of this I cannot speak by authority. I cannot give the number of acres planted to vines in the Sonoma valley, but calling it six miles from the most northern to the most southern point of our visit, and half a mile deep, which it is not, and it would give us in round numbers some two thousand acres planted to the vine. There is much no doubt planted throughout the valley which we did not see, but I do think the above estimate of two thousand acres, is not far from the total amount in the valley.

In the afternoon we visited the wine cellars of a son of Col. Harazthy, who married a daughter of Gen. Vellejo. He is engaged in the culture of the grape, and the manufacture of wine, from the estate of his father-in law and others, and the remarks made by the writer relative to his father, will also apply to the son. A more affable, courteous, gentlemanly young man, it has never been my good fortune to meet.

At the association the grapes are crushed by passing between rollers; here they are all crushed by being treaded, the young man insisting that it made the best wine. He has certainly excelled. Here we were told that California produces but two kinds of wines—the white and red, sour wines of a heavier body, and in many respects superior to European wines of the same class. A most delightful port and sweet wine is made at Los Angelos, but I am told are sugared or manufactured, and not the pure juice of the grape fermented. The natural wines are simply the juices of the ripe grape fermented, which makes the sour white and red wine, and the sweet wines have simply sugar added to the juices. Better wines I certainly have never drank—or to my taste—than some I have drank here.

The wines and vines of which I speak, are all from the old Mission vines, known as the Los Angelos or native grape. The old fathers of the church in the earliest history of the missions, no doubt imported from Spain a variety of the choicest vines, and after a thorough trial reserved the best, and discarded all the rest. It is sweet and delightful in flavor, and we ate of some in the valley extremely rich, and it is a most generous bearer, but I have eaten of much market fruit here which was inferior to the Croton grape. Especially does this apply to the Isabella grape, of which I have eaten none here so good as those in the New-York market. It may be that after frequent eating of the native grape, I required a higher excellence, but I think not. I think the Isabella grape here, much more sour and inferior in flavor to what it is with us.

I must say, that on the whole I have been greatly disappointed in the size and flavor of the market grapes here sold. As regards size, they were mostly much smaller and inferior in flavor (so it seemed to me,) to the Croton grape. They were about the size of our Jersey Catawbas. So much had been said to me of them, that I could hardly realize that the fruit I saw on sale was the far-famed California grape, and I pronounce most of it inferior in size to the Croton grape, and in flavor. Of the grapes I ate in the Sonoma Valley I make an exception; that fruit in flavor and in size of fruit and bunches, greatly excelled anything I have ever seen or eaten of at the east, except hot-house fruit, and I am not sure but at daddy Stratter's, the grapes there eaten were finer and richer in flavor than any I have ever elsewhere eaten.

I think Col. Harazthy informed me that of all the foreign varieties he had tried, that none were equal to the Mission grape.

At Suscol Landing there was formerly an extensive nursery, and it is now converted into an extensive fruit and market garden. It is owned by the brothers Thompsons, who received us as strangers in the most cordial manner, and extended unlooked for courtesies. The orchard is the largest I have anywhere seen, covering some hundreds of acres, and so cleanly and perfect was the culture, that in our walk of two or three miles I did not see one weed.

The house is large and fine, surrounded by the only evergreens we saw in our whole trip. The avenue to the house was lined with fruit and ornamental evergreens, among which was a cyprus, that very closely resembles our red cedar.

Here I saw my favorite Norway spruce. Near the house was a very fine sugar pine, the wood of which is very like our eastern white pine, but the foliage it seemed to me was finer. This tree, near the kitchen, was thirty two feet in height, and the seed was planted in 1857, the tree only seven years from the seed—the most remarkable growth I ever noticed. It must have been near 12 inches in diameter.

Broad, generous avenues extended for miles throughout the grounds, mostly planted to fruit trees. There were many thousands of standard and dwarf pears and standard apples, but the fruit had been gathered, and we could only admire the beautiful culture the trees had received, and surely it would gladden the heart of any lover of the country to look on the admirable culture those orchards and grounds had received. Nowhere out of California have I seen such perfect cultivation, and all of the house surroundings and barn of the same type of neatness. In place of several barns and sheds he had but one—immense, much the largest that I have anywhere seen. Here were all the implements and machinery for an immense establishment.

One of the most lucrative branches of his fruit are his cherries, and they sell from one bit to one dollar per pound. The birds devour them unless they surround and cover the trees with netting. Cherry trees are short lived, and though they bear enormously, yet the black knot and gummy discharge soon destroys them. As it is on tide-water, grapes and peaches do not do well.

The few hours spent here were most delightfully passed, and though I did not ask, and do not know yet the two brothers and their father, who was absent, I think must yearly derive a very handsome, if not large, income from their estate. The order, the system and the neatness throughout, was admirable.

The city steamer lands on their grounds, taking daily their produce, which is sent to a commission merchant, and each day brings back the empty boxes and barrels, and bags.

"OLD HURRICANE."

Sweet Potato Culture in Gloucester Co., N. J.

L. TUCKER & SON—*Respected Friends:* In response to your inquiry, "if the sweet potato is not a specialty in the planting of your county," &c., I will say, that it is probable that this vegetable is cultivated in the county of Gloucester to much greater extent, to much greater perfection, and also to greater profit, than in any other county in the United States. Decidedly it is our staple crop. If statistics were within reach to show the amount of money brought into this county during the last ten years, it would surprise many of us who are somewhat familiar with the extent of its cultivation, and be looked upon as an exaggeration by the inhabitants of much richer counties in other States. The quality of the potato, both for the table and preservation, is best when grown on light or sandy land, but the crop is not so large as when there is considerable loam, underlaid with clay; on this kind of soil wheat often follows, with clover and timothy, which is mown for two or three years before it is plowed for corn, to be followed by potatoes. The more sandy land is sown with rye; but very frequently when either quality of land is found well adapted for their growth, they are cultivated for a number of years in succession, without much diminution of the crop or apparent deterioration of the soil.

A clover sward, if designed for this crop, should be plowed in the fall or early winter, well harrowed, and skim plowed, or thoroughly pulverized with the cultivator in the spring, just before the ground is marked out for manuring. Land under cultivation the previous year, especially if light, should be plowed only about three inches deep, and I have known some very successful growers who used only good cultivators to mellow the soil, being satisfied that the crop was both larger and the potatoes better shaped for shallow stirring. The ground is usually marked out both ways with a one-horse plow, the rows being 33 inches apart; then a full quart or more of well rotted manure is put in each hill with a shovel from a cart, the horse walking in one furrow, the wheels running in those on each side. Much of the manure is bought in Philadelphia in the fall or early spring, and previous to this year at a cost, with freight, of $1.25 for a cart-load that would do for 300 hills. If the manure is from our cow-yard, it is necessary to put it in conveniently situated composts in the field, as soon as the frost will allow, covering an inch deep with surrounding dirt or marl carted for the purpose. The manure is thrown loosely on the heap with the fork, to hasten its heating, and it must be turned and well shaken up, which with long manure has to be repeated two or three times, in order to have it rotted enough to cut with a shovel. It is better that the manure should have a hoe full of dirt put on each hill as it goes from the cart. In this state it is left until the day the plant is ready to be put in, which should be about the twentieth of the fifth mo., (May,) or as soon as there ceases to be any danger of frost; the hill is then made by adding two or three additional hoe-fulls of dirt. When setting the plants, by running the hand down, get the root into the manure if possible; if the ground be dry, it is better to water the same evening. The seed is sprouted in hot-beds, made about the first week in the 4th mo., (April,) by selecting a sheltered place fronting the south, and taking the dirt out about a foot deep, 6 or 7 feet wide, and long enough to hold the seed, laid carefully side by side a quarter of an inch apart; a basket full (three pecks,) will—if the hot-bed does well— pull about 5,000 sprouts, or enough for one acre; medium sized potatoes are used. Previous to filling the bed with manure, which should be from the horse-stables, of the best kind, the sides are lined with boards or slabs, with stakes to keep them in place; the manure should be shaken in lightly and evenly to a depth of from 12 to 15 inches, on which spread about two inches of fine soil or sand, lay in the seed, and cover them with as much more dirt of the same kind. Then coarse hay, to the depth of two or three feet should be put on, and by boards, or covering of other kinds, the rain kept out. Daily care must now be taken to watch the heat of the bed,—by forcing the fingers down into the dirt,—as more hot-beds are injured by too much heat than by cold. It may generally be cooled sufficiently by removing the hay for a short time; if not too warm this need not be done, and the hay may remain on until the sprouts are above ground; when in the middle of the day, the bed should be cleared to the sun for a few hours; but for the first day or two a very little hay must be left on, or the tender sprouts will be burned by the hot sun. When the plants are ready to put in the hills, care should be taken in pulling them to have as much root as possible, and not to pull the potatoe out, as there will soon another crop of sprouts shoot up for later planting, if the bed is kept *damp*, as it should be, from the time the sprouts get green, by artificial watering—with not too cold water—should there not be seasonable showers.

They are generally hand-hoed three times; the two first directly after passing the cultivator both ways once between the rows, which is previous to the vines getting so long as to require turning. For the last hoeing, every other space is cleared of the vines by using a stick to turn them; then throw a shallow furrow, with a one-horse plow, to each row; clear the intermediate spaces of vines, and serve them in like manner. If the previous tendings have been thorough, and at the right time, which is rather before than after the grass starts, but little use will be found at this time for the hoe, the few weeds or bunches of grass being more readily pulled up with the hand; but the rule is, to keep them clean, and this is better done in stirring the surface of the hill by scraping dirt to top, than by allowing the hoe to go deep enough to cut off the small roots where the potatoes are forming.

They are dug with a wide hoe, sharpened at the sides (as well as the point,) with which part the vines are cut off near the hill by one stroke, and with another the whole hill is lifted out, and four rows being laid together, they are carefully put in baskets, and with as little bruising as possible, conveyed to market, or the place where they are to be kept during the winter. Many are stored in bins or boxes, in dry cellars, and some in houses built for the purpose; but in either case, they must not be placed against the outer walls of either houses or cellars, as warm air must circulate around them. The heat should be regulated by a thermometer, and kept as near 55° as possible. Small coal stoves or furnaces are generally

used for heating. When the potatoes are dug, the sooner they are got to the place of keeping the better, and they should not be moved or disturbed until they are wanted for use, for in a few days after moving they will begin to decay.

Those who desire a good sweet potato in winter and spring, should procure them early in the 10th mo. (October) from some reliable grower, and in the shortest time, and with the most gentle handling, place them where they are to remain until wanted for use. We who live where the climate and soil perfect them, seldom find the sweet potato north of the city of New-York, and especially at this season of the year, of a quality we care to eat. And by the way, to be good, they should always—after the first fall month—be *roasted*, and not boiled.

This answer to your letter is longer than is desirable; but how to make it much shorter, and have it practically useful to the inexperienced cultivator, I have not been able to see. J. C. TATUM.

TOP-DRESSING MEADOWS.

We need more experiments in top-dressing grass lands. We must, however, remark at the outset, that scattering straw in bunches, manure in lumps, and compost in clods, is not top dressing, or at least not deserving of the name. The efficacy of spreading manure finely and evenly on the surface is well-known. If done early in autumn, it is found to be more efficient than when performed at the beginning or during winter; and it is more useful in winter than when delayed till spring. There is more than one reason for this difference. One, a well-known one, is the solution and washing down into the soil of the enriching parts. If the work is done early, more time is allowed for the full completion of this process by the whole rains of autumn, winter and spring. Another reason is the protection afforded to the grass plants from cold and sweeping winds by the covering spread above the roots. When the top-dressing is scattered early in autumn, the protection and enriching together, and the tendency of the top-dressing to preserve moisture on the surface, causes immediately a rank growth of green grass; and this rank, green growth will often render the dressed portion conspicuous from the rest when seen a long distance. This increased growth not only renders the plants stronger at the root, but gives them an additional covering against the cold of winter.

So far, but little has been done in the way of top-dressing with other substances than fertilizers. A few experiments have, however, proved that the mere mulching—the covering of the surface for the purpose of protection, and for giving depth and strength to the roots, has accomplished important results. A. B. Dickinson's mode of spreading a finely pulverized stratum of earth over his meadows, by irrigating with muddy water, is well-known—by which he has obtained three tons of hay and upwards per acre from his large meadows. A striking experiment is mentioned in the COUNTRY GENTLEMAN, p. 10, of current volume, by a correspondent at Pepperell, Mass. He spread at the rate of about a thousand bushels of muck per acre, which had been somewhat enriched by the manure of swine. This would form a coating less than half an inch thick, if spread perfectly even. The result of this top-dressing was two crops of grass in the same season, both amounting to five tons per acre. The experiments which we need in relation to this subject are the application of various substances to the surface of meadows, in order to observe their various results. These substances must be capable of fine pulverization—for if thrown down in lumps or heaps, so as to be several inches thick in one place and entirely absent in another, they cannot accomplish a great deal of good. Saw-dust, which is abundant in some places, may be spread with great facility, but its light and porous nature would probably render it less valuable than an equal coating of strong soil. It is, however, well worthy of experiment. Fine peat or muck, dry enough to form into powder, might be spread with nearly as much facility, and would doubtless prove more efficacious. Lastly, and much the best of the three, and only inferior to manure and compost, is alluvion, or the washings of strong, fertile soil. Being free from stone, and of a fine even uniform texture, it may be spread evenly, when dry enough, without difficulty. The best way of spreading it, unquestionably, is to adopt the Dickinson mode of carrying it over the surface by streams of water, after excessive rains. There is another material which may be used for this purpose, the value of which experiment only can prove—namely, fine or coarse sand, or dry quick-sand.

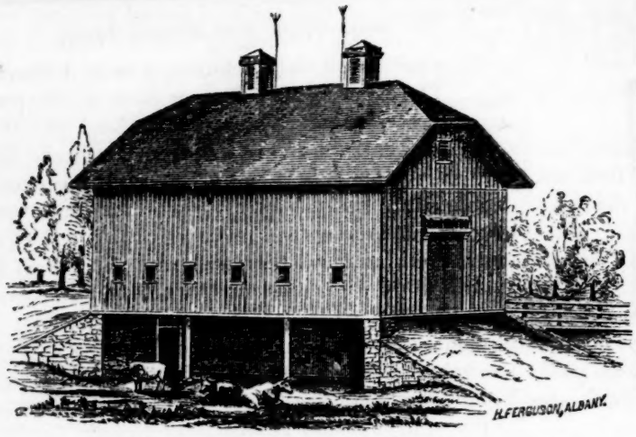
The writer once owned a meadow, a part of which was annually inundated by a turbulent creek, which left at every flood a thin coating of fine sediment. This sediment did not contain any unusual amount of fertilizing matter, for it was merely the washings from the country above. But the result was an annual and certain crop of at least three tons of hay per acre; while the remainder of the meadow above high water mark, although possessing apparently as fertile a soil naturally, yielded a varying return of a ton to a ton and a half. There may be many instances in which farmers could imitate this top-dressing by applying the different substances already mentioned to their meadow lands, during the comparatively leisure season of winter.

SMOKE-HOUSE.

If "Lincoln" builds his smoke-house of brick, it will not be dry enough to keep ashes in, nor so good to smoke his meat in as one built of wood. Ashes kept in a brick or stone building become damp, which injures them very much for soap-making.

I recommend (from experience) a building of wood, the four corners of which rest on blocks of stone, which raise the building a few inches from the ground. The lower half is lined with brick, and the floor, which is of stout oak, is also covered with brick. This secures it from any fire in the ashes, and it is perfectly free from any dampness. The fire for smoking the meat is made in an old iron pot, which is set down nearly to the floor, as far from the meat as may be, and is readily covered, in part, to secure a slow fire.

The door is in the upper half of the building, above the lining. The brick lining is laid in mortar made of clay, instead of sand and lime, and is not affected by any chemical action of the ashes. N. REED.



BARN ARCHITECTURE.

It is a deplorable fact that farmers generally, in setting about improvements that often occupy a lifetime, and are supposed to embody the results of mature judgment, make less use of previous plans and systematic thought than most other business men. It may be some palliation that unexpected changes are made as capital is acquired, but if it were possible to strike out any general principles to guide the commencement of operations, future additions would not prevent the whole work from being in harmony. Through most of the middle States barns are built much after one model. Commencing at one end we have a row of horse stables, then driveway or floor, then another row of stables or bay for hay, making from 30 to 40 feet in length. If the barn is wide enough to more than hold a wagon with its load, a a small mow is laid on the girders in front of the wagon. Unless the posts are very long, the back of this mow is up to the rafters, demanding much care in filling, it that it may not tumble over on the wagon.

This style of building was first innovated on by the introduction of cellar-stables. The stock being put down stairs, the hay-mows were dropped down even with the floor, and a practical addition of 7 or 8 feet thus made to the height of the barn. If the building is not more than 40 feet long, it now does pretty well, but if more than that, it is unhandy to fill the mows from the floor, and there must be either windows or another driveway, or great carrying of hay when labor is worth double rates. Nothing short of an exact duplicate of the ground plan works to the best advantage. What do we build barns for? To shelter our stock and our crops, and especially to cover our stock and their winter keeping, and incidentally to make manure and do certain kinds of work in.

Stowage capacity then for animals and fodder, convenience; that is, economy of labor in filling the barn and feeding the stock, are the essentials of a good building, and it is frequently advantageous to have it capable of enlargement by any required amount, and without inconvenience. Perhaps some advantages may be gained by making the driveway parallel with the ridge of the roof, and an end section of such a barn would appear as follows:

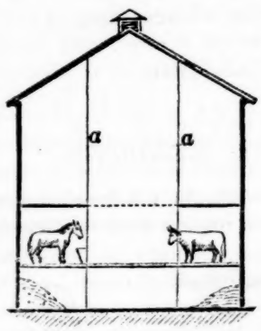


Fig. 1—Section of Barn.

It will be observed the interior lines of studding, *a a.*, run from foundation to rafters. If they are 12 feet apart, they divide the mow in bays of convenient size, and all the hay may be put in by a horse-fork, commencing on the end opposite the entrance and laying poles across the driveway on the string pieces, the space of one bay os 12 feet. The side part of the bay might better be first filled, and a movable apron used. When the first bay is filled, lay another, and so the whole length of the barn, and no hay will have to be swung more than 12 feet from the wagon. The poles may be slipped on the side mows when not in use, and the last bay filled through a window over the doors. Suitable well holes being left at intervals, a barn may be filled in this way chock full without any handling on the mows. The posts should be so long as to keep any one from ever thinking about stowing away in the peak, for that is a job that, with dusty hay and no air, enough to drive a young man off from farming for life.

It is quite desirable to support the girders

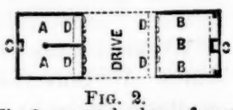


Fig. 2.

Fig 2, ground plan of one section of Stable Floor—A. A., horse stables; B. B., cow stables; C. C., manure traps; D. D., mangers.

of a barn with studs at short intervals as it obviates the necessity of searching for very large sticks to be strong enough to span 25 or 30 feet. If the heads of the stables are turned to the wall, the cows in stanchions, and the partitions of the horse stables short, a very narrow barn may be fixed this way.

The manure cellar is traversed by a driveway in in the same manner, and if sufficient attention is paid to making it, will not be found too large. In places like Chester Co., Pa., where the ground is very rolling, some barns are built three and even four stories, the upper floor as close to the peak as possible, which was very nice before horse-forks came out.

Supposing the central studding to be 12 feet apart, it makes two horse or three cow stables, wider than usual, under each bay, but any one can suit his own notions on the proper width by changing the distance of the studs. On such a plan every additional bay is precisely like the preceding, and a barn built for five animals might be enlarged for fifty without disturbing its previous arrangement.

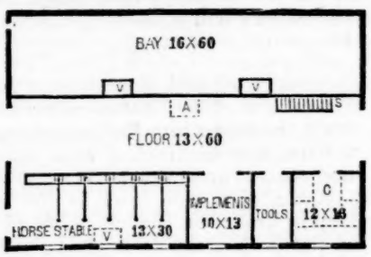
Where it is necessary to make a high incline or sloping road to the doors, the part next the barn is sometimes made into a wagon-house, the road being planked on the roof. It is also a good place for a horse power, being close to where the machines stand, and yet out of the way. I have seen a cistern in such a place filled from the roof, and the water would run in the yard below through a short pipe by turning a cock.

Barns like this are beginning to be built in Burlington Co., and seem capable of furnishing great conveniences, to those who use good judgment in adapting them to their purposes. W. H. S.

Woodbury, N. J.

These suggestions for the construction of barns are well worthy of consideration. Our correspondent will

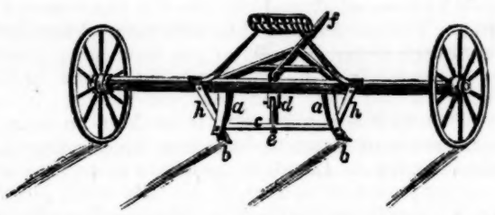
find on page 133, vol. 3, RURAL AFFAIRS, a plan quite similar to the one he describes. For the purpose of



illustrating more distinctly his meaning, we copy the plan of the principal floor, and give the perspective view at the head of this article, of the barn, in order to show the manner in which the wagon passes in at one door and out at the other, without backing.]

CORN-MARKER.

This corn-marker is attached to Alzerin Brown's Wheeled Horse-Rake. The rake-head and levers are easily detached, the marker attached, and vice versa. The wheels of this rake stand apart 8 feet 3 inches, which, divided by 3, gives 2 feet 9 inches as distance



between rows, which is right for us. The scantling *a*, *a*, are 3 by 3 inches, with a mortice in one end for an old cultivator tooth, *b*, *b*—a sny bill at the other, to attach it to the under side of front crossbar on the thills—*c* has a mortice, *e*, in middle for insertion of link *d*—*c* has also two long gudgeons inserted in large staples in sticks *a*, to give independent motion up or down. Link *d* is also attached to lever *f*, on crossbar *g*. By putting the foot on lever *f*, the teeth are raised clear of obstructions, and for turning at the ends of rows; the boards *h* are screwed outside the lags to hold them longitudinally. By tracing one mark with each alternate wheel, the machine marks three rows at once on the roughest of ground. It has the advantage of a seat for the driver, (not shown,) marking three rows at once, or four if you fasten a long pole just forward of the wheels, with a light chain at each end to trail in the last mark. The wheels make a very distinguishable mark, and last, but not least, you come very near having two handy tools in one. H. HOLLISTER.

Mount Lebanon.

Farm Grist Mill.—After using a Burr farm mill one year, I would not recommend them to any one without water or steam power. They will suck more flesh from your horses than all toll and convenience will put on; besides a small stone will not grind so fine as a large one. My water power is abundant, and by running 300 to 400 revolutions per minute it does well; I am well pleased with it; I grind all my grain that I feed; mine is a two foot stone, but velocity will not make up for size, for when the grinding surface is less, the grain comes out sooner. L. F. SCOTT.

Pruning Apple and Peach Trees.

I should be much obliged to you, Messrs. Editors, if you would give me your opinion in regard to the proper time for trimming orchards. There has been a wandering orchardist in this locality lately, who advises to defer trimming till the trees shall be in bloom. Our custom has been to trim in February or March. If the former plan is a better one, we should be glad to know it through a better and more reliable authority. I would like to know, also, how it would do to cut back peach trees, of say six years growth. I have an orchard, the limbs on the trees of which have grown too long and switchy, so that when the fruit on them, only a fair quantity, reaches its size and weight, the trees break down or split down rather. If it would do to cut the ends off the limbs, and not injure the trees thereby, I should be glad to know it from some one of experience. H. B. P. *Concord, Pa.* [Trimming after the leaves have expanded, causes the wounds to heal best, but it always checks the growth of the tree, and should therefore be applied only very sparingly, or else to rank growers. Peach trees may be pruned successfully by cutting back several seasons' growth, taking care always to cut at a fork, so as to leave no stump—the smaller branches at the fork may be left. Care should be especially taken that buds are left for new shoots.

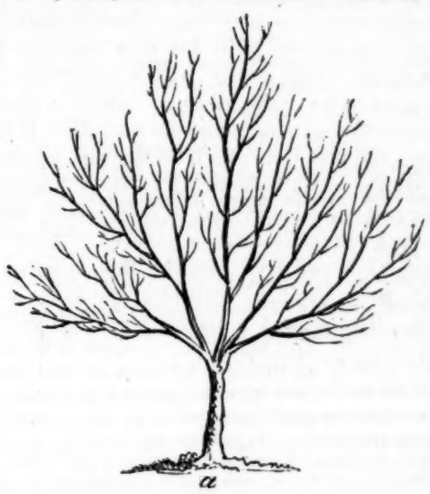


Fig. 1.

Three or four feet may be taken off in cases of necessity, at a single stroke, and if judiciously performed, will convert the broad head, which is beginning to become enfeebled, into a smaller, neat, round and open head, possessing all the thriftiness of a young tree, and bearing as large and excellent fruit. Fig. 1 shows the tree before being thus cut back, and fig. 2 the

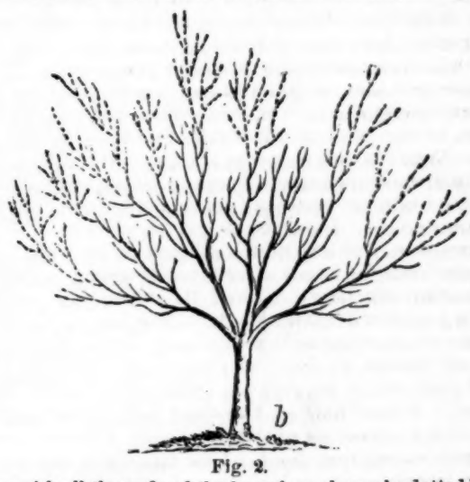


Fig. 2.

same with all the ends of the branches, shown by dotted lines, removed. It must be remembered here, as in all other instances, that the outer shoots must be sufficiently *thinned-back* to admit light to the interior. The shearing which is sometimes adopted, like that of a common hedge, only thickens the foliage on the outside, and increases instead of diminishing the evil.]

ON BITTING COLTS.

Having spent the most of my life among horsemen and horses, and have bitted and helped to bit some hundreds of colts, and drive more or less every year, I claim to know what kind of a mouth a colt or horse ought to have. In the first place, I take a green colt up from the pasture, put him in a loose box or stall, not give him any feed that night; the next morning I go into the stall; of course the colt, if a wild fractious one, will jump and snort; have a good head bridle with a good snaffle bit, with arms or check pieces on, and a good ring in the centre with 3 or 4 good tinglers attached to the ring to keep up the circulation of blood in the mouth or tongue; be sure and have the bit even, for this is one of the greatest points in having an even mouth. I sit one hour with a pair of calibers and a fine file to get both sides of my bit even and alike. I said the colt may start and be wild: do not stir or move, but look him straight in the pupil of the eye as stern as possible, yet look pleasant, show no fear; look at him until his ears begin to move, then approach him gently with a bit of hay, or an apple, or an ear of corn, or some oats in a measure; have the bridle on your arm; do not show it to him carelessly the first time; let it swing, and let him nibble or eat the oats; talk to him—there is nothing a horse or colt likes better than to be caressed; pat him on the neck the next time, which will be the next morning. You can feed him the first morning after you have got acquainted with him, and at noon; none at night. The second morning have the bridle on the measure, let him smell of it—show it to him; if he is not afraid, let him eat his oats so that the bits will hit his nose; put your finger in his mouth where the bits ought to go if he is willing; if not, wait until the next morning. Try him again; by no means hurry the process; keep cool and have patience. The colt will come to it quicker and far easier than to foam and fret and grow old, while the colt is getting ugly every minute. Try this for a week; when you get so that you can open the mouth with your finger, and the colt is perfectly willing, just throw your right arm over his head or neck; talk to him all of the time—he will soon put his head down; then raise the bridle so that you can catch it with your right hand; if he starts or jumps, keep quiet; do not move; have your oats ready; let him eat some; get so that you can handle his head with the bridle in your hands. You can soon get him so that you can handle his head for half an hour—will do wonders. When you get the bridle on, be sure and take it up the first time, so that he will not get his tongue under the bit. What is worse than to drive some farmers' horses with the tongue over the bit? I once let one of my neighbors have my bitting rig to bit a colt. I wanted to get his opinion, and tell him my way, but he knew it all, and on he went. In about a fortnight I sent after my bitting rig, and told the boy to ask how he liked it. "Oh, just as lief have a common bit, and tie the side reins on the surcingle; don't know as it makes any difference about a horse's mouth so long as I can turn him out one side; good thing to make a great show with such things." I have noticed the same colt a great many times since; nose poked way out one side, no neck, and goes stumbling along. I for one could not drive such a horse.

After you have got the bit in his mouth, let him wear it about 15 minutes, then go up to him and gently take it off. I always unbuckle the bit and let him spit it out. Do the same the next day; let him wear it a little longer, and do so for one week. Increase the time of wearing of one hour for a week—that is, at the end of the week let him wear it for an hour every day for a week; lay your right arm over the withers where the girt or surcingle comes, and pat his neck with your left hand. Be kind and gentle with him. After the first ten or twelve days is up, put on the side reins and check; then the surcingle with a back strap, good and stout, with a large crupper well greased and stuffed hard—a small one is apt to gall his tail, and make him kick or rub the hair off. Have the surcingle seven inches wide, with a good strap in the centre over the withers, with a good stout ring on the back side towards the tail; have the strap loop in front for the check to go through, the ring for the back strap or crupper; then on the sides have a buckle, you cannot have it too stout; this buckle is for the side reins from the bit back or opposite of the buckle; this is for a britching. Have three small one inch buckles to buckle the surcingle, as there is a hollow and a rise on the colt where the surcingle comes, and three buckles and three small straps will make it fit these. Do not draw the colt up the first week; just buckle the side reins in the surcingle; let them be loose and hit against him. Let the check be loose; as soon as he begins to play with the bit, begin to draw it up gradually, for a week only an inch at a time every day. Bit your colt for the purpose you intend to use him for; if for the road, set the nose out a little—for the team, a little under. A draft horse always curbs his neck; a roadster puts his ears back and forth, and tries to snuff the air and see what is going on—the same with the trotter. The trotter should be well lounged as soon as he gets used to the bit. After you have got your colt used to the bitting rig, you should learn him to lead by it, say a half hour every day, no longer. It will do to let him run in a lot with it for half an hour, if you cannot spare time to lead him about; but they ought to be led, and made to go where you want them to. After your colt is used to all this work, put the quarter strap through the back strap, and put on the britching; draw it tight; not too low, for it would make him interfere. Hitch him in the stall until he gets a little used to it; then teach him to back. Never pull or twist him about, as I have seen some breakers do; be kind to him.

After all this is taught the colt, take a good whip, but never whip him; take some oats, let him smell of them; by this time he is willing to touch anything with his nose. Yet be gentle with him—never frighten him; brush his head with the whip, rub him all over with it; then when he is used to it in this way, begin gently to crack or snap it as loud as possible. My object in this is, as soon as you take him on the road no teamster's whip will frighten him. Get him used to an umbrella, buffalo robe, wagon, &c. The next thing, put him in a wagon, hitch him on a barn floor to a post both sides; let him stand, or have him hitched so that he can go ahead or back a little, as he likes. Let him get used to the wagon and noise, when he will move it along. After three days lead him on the road; drive him with a pair of long reins from behind the wagon. On the barn floor try to back him; if he does not back, take a good gentle farm horse, hitch him behind the wagon, start him up gently, speak "back!" to the colt distinctly; at the same time have a boy at the old horse's head to start him when ordered; the colt will soon learn to back, and will always be gentle. I have broke hundreds in this way, and never had a bad colt; no matter how wild on the start, I could always conquer them.

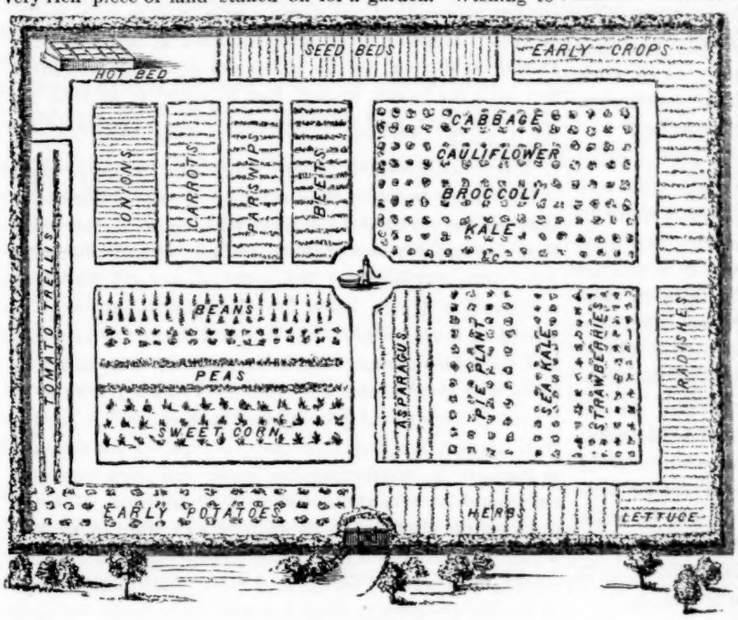
If a colt should lean a little harder on one side of the bit than the other, wind a piece of listing on the opposite side of the bit from that which he pulls hardest on; this will straighten his head. Always drive a colt with a large snaffle bit with check pieces, and always teach a colt to mind and fear you; to do this, never be afraid of him, and always have an apple in your pocket for him.

H. N. THURBER.

Pomfret, Conn.

HORTICULTURAL INQUIRIES.

Plan for a Garden.—Having perused the valuable columns of your CULTIVATOR, with a great deal of interest, I don't find any part allotted to farmers' wives and daughters. I feel interested, and wish to make some inquiries. Owing to ill-health I am recommended to out-door exercise, and have a very rich piece of land staked off for a garden. Wishing to plant that which will be valuable, and some ornamentals, I apply to you for a plan, and your best mode of planting a vegetable and flower garden, and what vegetables it would be best to plant. MRS. A. DECKER. [The above engraving represents a good plan for a kitchen garden which is spaded, or entirely worked by hand. It may be reduced in size, according to circumstances. We prefer a flower garden separate, but if impracticable, borders may be placed along the edges of the four quarters. The best style for a flower garden, both for beauty and economy, is to extend a gravel walk, by a constant and varying curve around a small, closely shaven piece of lawn, cutting the flower beds in circles, ellipses, or arabesque forms, as shown in the second figure—*a* being the dwelling, and *b* the summer house or seat; the white portion is the grass, which should be mowed at least once a week, and never allowed to grow more than two inches high. Such a flower garden as this may be kept in perfect order at one fifth the expense of one with the whole surface cultivated. The size may be varied indefinitely.]



PLAN OF A GARDEN.

FLOWER GARDEN.

Lengthening of Trees.—The answer which you gave in reference to my query respecting the lengthening of the trunks of trees, in the 7th number of the current volume of your excellent paper, appears to me to be not "according to the books," as I understand them, as you have there decided that the bodies of trees do continue to lengthen even for years. I will now take the farther privilege of asking whether, by that answer, you intentionally denounce the theory of vegetable physiology as heretofore taught, and if so, will you be so kind as to explain the principle on which the wood of the centre of the trunk is lengthened, for of course this must take place, according to your answer? A FURNAS. [Works on Vegetable Physiology, so far as we have observed, are silent on this particular point; and our observations are limited. The lengthening is of course extremely slow, and the amount never becomes great, even after the lapse of years, unless in the earliest stages of growth. If our correspondent will turn to page 146 of Gray's First Lessons in Vegetable Physiology, he will find a representation of woody cells lengthened by growth in its early stages; as the tree becomes older, the lengthening is diminished till it ceases. The elasticity of wood, or its capability of lengthening slightly, is shown every time a stick is bent without breaking.]

Peas in Orchards.—Having an old orchard, (occupying about four acres, some of the trees being dead,) which has been in grass for some time, I wish to plow it, as it seems to be turf-bound. How will it do to sow peas? But peas being a new crop to me, I should like some information about them. Will they do as well in the shade as other crops, such as potatoes, barley, &c.? Is there more than one variety of the field pea, and if so, which is the best? What time should they be sown; or would it be better to drill them? Any information would be thankfully received by F. C. W. *Columbus, O.* [No crop succeeds well in shade, and if the trees are broad and spreading, a shallow plowing alone may be sufficient. Sometimes a top-dressing with manure, with subsequent close pasturage, answers well for an old orchard. Corn or potatoes would be better than peas, as these crops require hoeing. No sown crop is good for an orchard, and such crops frequently do more harm than good. If many of the trees are decaying, a new orchard should be planted on other ground. Peas are usually sown about corn planting time or earlier—drilling would doubtless be better than sowing them broadcast, as it would deposit them at uniform depth. There are different varieties—some prefer the Marrowfat for field sowing—but experience does not enable us to speak confidently as to the best variety.]

Grape-Cuttings.—I have some cuttings from grapevines which I wish to try my hand at growing this spring. A. C. in CO. GENT. of Jan. 5, and F. A. Fleming, Feb. 16, tell how to grow them, but they do not tell *when* to put them in the ground, nor *how to keep* them till that time arrives. Will you please inform me on these points in next issue of your paper? R. B. C. [Grape-cuttings are easily kept in damp moss, or in moderately moist soil. The cuttings should be set out in open ground as soon as it can be rendered mellow, and worked properly—the soil should be pressed closely about them—they should be ten inches or a foot long—placed in an inclined position, with one bud at the surface. Cuttings in open ground often fail; they are much more certain under glass, for the mode of managing which see last REGISTER.]

Sales.—John S. Goe, near Brownsville, Pa., has sold three Short-Horned heifers, and two Morgan mares, to D. H. Ryall; also one Short-Horned calf to R. S. Smith.

GROWING OATS.

MESSRS. EDITORS—The oat crop is getting to be of very considerable importance, and the vast consumption in the army, and consequent high prices, will be very likely to induce farmers to sow all they can this spring. But aside from this demand, the ease and facility with which oats may be grown on all kinds of soils, and under all circumstances, and the fact that there is no other grain that is so handy, or in such universal demand for feeding horses, must continue to make raising oats an important part of farming.

But the ease with which oats may be grown often leads to sowing them where justice is neither done to the crop nor the land. There are several ways in which this is often done. One is sometimes practiced on some of the best farms, where wheat is made the leading crop, and is partly owing to the opinion that oats are a very exhausting crop, and consequently injurious to land that is principally intended for wheat. In such cases oats are only sown on some of the poorest, out-of-the-way portions of the farm, and where, from the limited amount of land devoted to the crop, they are sown very frequently, and often several years in succession, on the same field. This, of course, will not give very good crops, and often they will be quite poor, while at the same time the effect on rather poor land without manure, or frequent seeding down, as is generally the case, of course cannot be favorable.

It is also a very bad practice to sow oats year after year on the same field, until the land is so badly run down as to hardly give half a crop. Of course this practice is injurious to the land; and so it would be to grow wheat or barley in the same way. In fact there can be little doubt that either of these crops grown the same length of time on one field, would injure the land more than oats, while undoubtedly they would fail to yield paying crops much sooner than oats.

But while growing oats year after year on the same field is a very bad practice, it by no means follows that they cannot be grown to good advantage in a rotation where corn and clover occupy a prominent place, and where they are not sown oftener than once in from four to six years. In such a rotation oats should always be sown after corn, or some other hoed crop, when, if the land is in anything like good condition, they are sure to give a heavy crop. In this way, in common seasons, my usual average is over 50 bushels to the acre; and instead of oats grown in this way injuring the land, it is constantly improving and the crop increasing. And this is the case, although I have never applied any manure directly to the crop; though when the previous crop of corn is manured, of course the succeeding crop of oats is benefitted by it. I also find that oats is the most profitable sown crop I can raise after hoed crops; and I always want to sow such land, so it may be seeded to clover. And then oats do better when sown after a well tended hoed crop, having a brighter, stronger straw, which makes them much less liable to lodge, or get down so as to injure the crop. They are also less liable to rust, though if sown very late, they are sometimes injured. Like all other crops, they are the surest and best when sown in good season.

But oats are much more apt to rust when sown on an old sod. On such a sod, composed, as is usually the case, of a mixture of timothy, June and wire grasses, oats make a slow and feeble growth in the fore part of the season; but in the summer, when the sod begins to rot, and the roots of the oats begin to take hold of it, the crop comes forward much faster, but makes a kind of a squashy growth of very soft, limber straw, that get down easily, and is very liable to rust. Hence a good crop of oats is scarcely ever raised on such a sod in this section. A good clover sod will do much better, but is usually wanted for wheat or corn, and undoubtedly is more profitable for these crops.

After various trials in growing different crops after oats, I have become well satisfied that it is decidedly best for me to seed to clover with oats. I not only find clover the most profitable of any crop I can raise after oats, but it gives, in a good clover sod, the best preparation I can have for the succeeding crop of wheat or corn. I also find it much better to be satisfied with two grain crops in succession, than to try to grow a crop of wheat after oats. True, a fair crop of wheat is sometimes grown after oats when the land is well manured. But this course requires an amount of manure by manuring for corn, and then again in two years for wheat, or twice in a rotation of some five years, that is more than I am able to make; while I am satisfied that I can improve my land much easier, cheaper and faster, and raise much better crops of wheat, by seeding to clover with oats, and getting a good clover sod to turn under for wheat. And then, by thus seeding down with oats, and then again with wheat, I can raise and have more clover hay to feed to make manure. F. *Orleans Co., N. Y.*

SURE REMEDY FOR ONION MAGGOT.

I have noticed lately several inquiries—"How to destroy the maggot in onions?" For two seasons past I have practiced an accidentally discovered expedient, with perfect success. When the plant *begins* to form the bulb, after first weeding, I draw the earth from it as much as possible, so that the plant will lie down, leaving the small roots below the bulb unharmed; they support the plant, and in a day or two it is erect again, and the *bulb* growing on the *top* of the soil. My opinion, the result of experience, is that the sun is the antagonist of the maggot. I have tried lime, lime and soot, ashes, &c., without success. Having received no little benefit from the various communications in your journal of this character, I feel under some obligations to do what I can to reciprocate as far as in my power; hence these remarks for what they are worth.

Great Barrington, Mass. M. LUDLOW WHITLOCK.

How to Preserve Smoked Meats in Summer.

MESSRS. EDITORS—A correspondent in the COUNTRY GENTLEMAN of March 30th, wishes to know how to keep "beef and hams through the summer after they have been smoked." If he will take black pepper and grind it very fine, the finer the better; then wash the hams or beef, and rub while damp, thoroughly, with the ground pepper, a sufficiency will adhere to them to safely protect them against the depredations of flies and bugs through the summer. In the cure of hams he may omit rubbing the skin side. Two pounds of pepper is sufficient for 30 pounds of meat. It may remain hanging in the smoke-house during summer. This will also impart a fine flavor to the meat.

Fern Creek, Ky. HENRY F. VAIL.

GROWING PARSNIPS.

MESSRS. EDITORS—Having had some little experience in raising parsnips, in a small way, with very satisfactory results, both in regard to growing and feeding them, and having seen but very little in regard to other's experience with this root in this country, though often favorably mentioned in the agricultural journals, I have thought that a short chapter on their management might not be without interest or benefit to some of your readers.

I first commenced raising parsnips for the table; and, finding I could raise them with comparatively little trouble, I soon began to raise them to sell in the neighboring village markets. This led to sowing them in drills, in the same way, and at the same distance apart that carrots and turnips are usually sown; but with this difference: they should be sown earlier; as soon as the ground is dry and warm, and in a good condition for the seed to germinate, is probably the best time. I soon found that I could raise parsnips as easily and cheaply as any other kind of roots, for the following reasons:

They have a broader leaf, and are more easily distinguished from weeds when they first come up, and at the first hoeing than carrots; and not being troubled by any insects, they grow and come forward much faster than turnips or carrots, making less trouble to tend them when small, while they much sooner get the start of the weeds. They make a much more rank and vigorous growth, and much sooner and more completely cover the ground than carrots or turnips; thus requiring very little attention after they have fairly got to growing and the leaves cover the ground. The yield has averaged a good deal larger, often from 40 to 60 per cent. more than carrots or turnips. I have usually raised the large Dutch to feed.

They keep well in the ground through the winter, but will commence growing very early in the spring; but then if gathered, they will wilt and dry up worse than any other kind of roots; so that it is probably best to dig but a few bushels at a time to feed, until it is necessary to clear the ground, as they will keep as well in the ground if they do commence growing, as they will out. If gathered in the fall, they should be fed out first, as other roots keep much fresher and better.

Feeding.—I find that horses, cattle and hogs are all fond of parsnips; but I have generally fed them to cows and hogs. When feeding them to cows, we find that we get as much milk and butter as when we feed carrots; but though sweet and good flavor, the butter will not be quite so good color. There is no kind of roots that will make as handsome butter in the winter as carrots. To feed raw to hogs, I find parsnips give better satisfaction than any other kind of roots; while by weight, I find they give about as good satisfaction as potatoes. They are lighter than potatoes, so it takes more by measure to produce the same results; but being much more tender, and a better shape to get hold of, my shoats—I have only fed them to shoats that I was wintering—eat them much more readily than potatoes. And I find to feed raw to store hogs, that neither mangolds, beets, turnips nor potatoes are as readily eaten, or give as good satisfaction as parsnips. F.

Orleans Co., N. Y., 1865.

HOW TO MAKE BEAN SOUP.

I wish to tell the "30-year old Bachelor" how to make bean soup. First I soak three pints of beans over night in water. In the morning, as early as possible, I put on a shank of beef, in some eight quarts of water. At ten I add the beans—at noon I add a little salt and pepper—also butter to suit my taste. Some prefer it thickened with rice, and carrots and potatoes are sometimes added; but I leave them out. If they are used, they should be put in one hour before dishing.

Rutland, Vt. A 20-YEAR OLD MAID.

MESSRS. EDITORS—Having seen the inquiry for a receipt for bean soup, I send one that I think very good:

Pick over and wash one pint beans; put them in sufficient water to cover them; let soak one hour; drain off the water; cover them in sufficient water to cook them done. Season with salt, pepper, and butter. Then stir a batter with 2 tablespoonfuls sour cream, ½ teaspoon soda, the same of salt, and two eggs; drop the batter into the soup while boiling. Let it boil up two or three minutes, then serve up. This is nice seasoned with veal or beef. MRS. A. DECKER, *Phelps, N. Y.*

——— In a late number of your paper "Bachelor" inquires how to make bean soup. In the first place I would advise him to get a wife to superintend his cooking, as *I* think men are entirely out of place in the kitchen. But lest he should get one who does not know how to make this very wholesome article of diet, I send him my method:

Take a nice beef shank or other soup bone, and a pint of marrow beans to a gallon of water; let it boil four hours; season with butter, pepper and salt. Strain through a collander. This makes a soup which my father pronounces excellent. GINEVRA.

DOG-POWER FOR CHURNS.

Seeing an inquiry in a recent number of the Co. GENT. for the best dog-power, I will try and describe one that I saw a few months ago in Morrow Co., Ohio. I did not see it in operation, but was told that it was a good one, and regularly used. It was a home-made machine, not patented. I did not observe it very carefully, as I took no measurements, and must describe it from memory. Perhaps some of your readers have used it, or are acquainted with its operation, and will give their views upon it. It appears to have some advantages over the endless-chain power, being cheaper, and I should think there would be less friction. As long as dogs are kept, they should partially pay their keeping.

This power consisted of a circular platform made of light half-inch boards, I should think about seven feet in diameter, in the center of which was an upright shaft with an iron bolt at top and bottom, which played in iron sockets. The shaft leaned to one side, and was so fixed that the upper end could be thrown more or less out of perpendicular, so as to gauge the power. The platform was about four feet from the ground, so that when the dog was tied with a short rope he would not jump off. At the side where the dog was placed a post was set, on which a wheel about two feet across, made of thick plank, was fastened. The outer edge of the platform rested upon this, and the weight of the dog as he kept walking up the inclined side, would press upon the small wheel, causing it to revolve. The churn was connected to this, the same as to the band-wheel on an endless-chain power.

ST. LAWRENCE.

GEESE AS PROFITABLE STOCK.

Of all our domestic birds, none are so profitable as geese, where there are facilities for keeping them; for there are none which can do so much for themselves when alive, and none that come to so little waste when dead. Unlike the fowl, all parts of the goose are equally good, besides which every feather is of value, greater than that of every other of our domestic birds. Every housewife knows how to appreciate bedding stuffed with their plumage, and in these days of metallic pens the goose still possesses quills. Notwithstanding we are furnished with pens of steel and silver and gold, in profusion, "but still," says a writer, "give me in preference to all such, the quill of an old white gander; in the use of such an instrument, as firm as it is elastic, there is some pleasure in writing."

The profit to be derived from geese feathers is not anywhere to be neglected; it is now and always has been an important article, and commands a fair price. An acquaintance of the writer who is particular in keeping his feathers clean, finds a ready market at the highest price. A common goose will yield from 15 to 17 ounces, while the Bremen variety, being of larger size and always white, yield on an average from one to three ounces more feathers, and of a better quality, having more down attached to them than the common brown goose.

Recently, however, there has been gotten up a crusade against feather beds, as well as against goose quills, and the whole object seems to orignate in a conspiracy to drive from the pale of public favor the bird which produced them. It is said that feather beds produce effieminacy, and curled hair made into matresses, only is compatible with health and vigor. It is possible that there is some philosophy in this; so far as there is we do not hesitate to make the admission.

When it is considered how great pecuniary profit may be obtained by the keeping of a few geese, to the general farmer, it will be readily admitted that to the small farmer or cottager, the boon will be still more valuable, as geese are easily raised, and being graziers will require less grain-food than any other poultry, and speedily arrive at a condition for market, and command a quick sale. We feel certain that if a common degree of care and attention is adopted, they will remunerate the owner with greater profit, according to the cost of feeding them, and the labor of watching over them, than most other poultry. All the fears and anxieties to rear the turkey, and prepare it for making a proper appearance at table, are with them unnecessary; grass by day and a dry shelter at night, is all they require. They will thrive well on grass that is too short for any other animal.

Geese have been accused of poisoning and rendering the spots where they feed offensive to other stock; but the secret of this is very simple. A horse bites closer than an ox; a sheep goes nearer the ground than a horse, but after the sharpest shaving by sheep, the goose will polish up the turf and grow fat upon the remnants of others. Consequently where geese are kept in numbers on a small area, little will be left to maintain any other grass-eating creature. But if the commons are not short, it will not be found that other grazing animals object to feed after a flock of geese.

It is known that sheep will do well on pasturage that has been cropped by cattle and horses as closely as they are able to do it. Yet after sheep have gone over it, and their sharp teeth have given it another trimming, a flock ot geese will find upon it luxuriant fare.

In allowing geese to run at large, it is requisite to be aware that they are very destructive to all garden crops as well as young trees, and must therefore be carefully excluded from young orchards and cultivated fields.

The best locality for keeping geese is a wide range, for where water and grass are plenty we need go no farther. Water of such size and depth as will permit at least a daily "paddle," is essential for stock birds, for here they resort as soon as they are set at liberty from the place of their night's rest, and here and then ensue the intercourse from which an increase to their numbers may be looked for, the presence of water appearing essential to the fertility of the eggs.

"All men," says an ancient writer, "must understand that except he have either pond or stream, he can never keep geese well." If we are to believe M. Parmenter, the vicinity of rivers and ponds is not absolutely necessary to the most successful rearing of geese, for in districts destitute of these advantages, a small reservoir where they can bathe will be quite sufficient.

Columella advises to pasture geese in marshy or moist grounds, and to sow vetches, millet and clover, but more particularly chiccory and lettuce, of which, he says, they are very fond. Grass they must necessarily have, and that which is moorish and unsavory for cattle.

It is believed that geese can be raised in a proper situation at a profit far greater than almost any other stock. But to do this more attention is required than is usually bestowed on their keeping and management.

Let us make an estimate of the profit of ten old geese in the manner they are generally kept by most farmers. We will suppose that the goose-keepers (for there are those who are not farmers) commence operations by purchasing ten geese in the spring before they begin to lay, at $1 each. Eight of the ten geese (for two should be ganders) will have on an average ten goslings each, but allowing one-half for paper calculation, and probably less through the season, it will leave us with a flock of fifty, old and young, worth when dressed for the market, not a dollar—the original cost—but half this sum, and you have $25. In addition to this every old goose will yield one pound of feathers, and every young one three-fourths of a pound, making in all 40 pounds, which, added to the $25, gives us $50.20. We say net profit, for there is not one goose-keeper in ten that feeds his geese either old or young, after the grass has started in the spring, until fattening time in the fall; and then their quills will often more than pay for their food.

The above calculation is made, having reference to the usual mode of managing this fowl, which is no management at all. Because, in the first place, they have generally no place to obtain their food but on the open commons, except such as they too often steal from meadows, to the great injury of the standing grass, and to the feelings of the owner, and very frequently putting their own necks in jeopardy.

But on the other hand, if the owner will provide a good warm and dry house for the accommodation of his geese while laying and hatching, and attached to this a pasture, where they may at all times have access to green grass and a small stream or a pond of water, with due attention and the right bird, which in our opinion are the Bremen, and our word for it, with only ordinary good luck, he will receive more than ordinary profit on the care bestowed and capital invested.

On the advantages of keeping geese, a writer in the Maine Farmer a few years ago said: "I once knew a couple of industrious sisters, who lived near a never-failing brook, and they generally kept through the winter thirty geese, male and female. They had erected some suitable but not expensive sheds, in which they had apartments for them to lay, sit and hatch. Their food in the winter was meal of various kinds to some extent, put principally apples and roots. In the summer they had a pasture enclosed with a stone wall, which embraced the water. They kept their wings so clipped that they could not fly over such a fence. Their owners knew what we all know, that live geese feathers are a cash article at a fair price. They picked off their feathers three times in a season. Those thirty geese wintered would raise seventy-five goslings, or young geese, and of course they had that number to dispose of every fall, or in the beginning of winter, when they are sent to market, and again picked, making four times they obtained feathers from those they wintered, and twice from the young ones that they had killed."

We tell this story to induce some family, sisters or brothers, fathers or mothers, situated near some never-failing brook or stream of water, to go and do likewise. Those remote from water cannot be benefitted by the history, yet their friends may; but if we can by this account cause one family to partake of the benefits of the business we shall be satisfied. Many families there are in all our towns so situated that they may make the raising of geese a profitable business, yet perhaps have never thought of their privileges. No one will object to keeping thirty or forty geese, if an enclosure is made sufficient to keep them at home and out of mischief.

PLUCKING.—Old, or what are termed stock geese, may be picked three, and, in some seasons, four times,

allowing six weeks interval, without inconvenience. Many are of opinion that it directly injures the health of geese to pick them. This operation, however, if done in a dexterous manner, and taking place just before the moulting season, a disease common to all birds, is followed by no inconvenience. One crop of feathers may be taken from the goslings, and some think it an advantage to them, but that could hardly be expected, and it should be deferred till the goslings are three or four months old before they are subjected to this operation, especially to those intended to be killed early, as they would get lean and lose some of their good qualities. Precaution should be taken when the goslings are just plucked, not to suffer them to go into the water, but merely give them drink for one or two days till the skin is closed. Food has great influence on the quality of the down and feathers, as also is the care of the geese. Great precaution is necessary; the feathers always bring away with them a kind of fat, which would give them a disagreeable smell and perhaps spoil, if this was not prevented by putting them in the oven after the bread is taken out, and keeping them in a dry, airy place. One pound of feathers is generally estimated to be the produce of the common goose; the Bremen and Toulouse will give more, and of a superior quality. Lean geese yield more down than fat ones. None but feathers taken from live geese or those just killed, should be taken to market; in the last instance they must be picked before the bird is entirely cold; the feathers are infinitely better for it.

We are not aware of any machine for picking geese; the thumb and finger must do that work. The time to do it is when the feathers are ripe, which occurs about four times during a season. It seems a cruel practice, to say the least, if we may judge from their appearance after the operation, as their drooping wings will testify. Feathers picked when green—in the pin-feather state—are not fit to be put in a bed; they cannot be cured so as to be light and sweet, as ripe feathers are.

Poughkeepsie, N. Y. C. N. BEMENT.

"STRUCK ILE"---USE OF KEROSENE.

Lubricator.—Having considerable machinery to run the past winter by horse power, and knowing of no accessible lubricator that would not grow hard in cold weather, I have been experimenting for the purpose of getting a lubricator that would stand the cold, not *gum*, be cheap, and accessible to all, and have found the following to answer the purposes very satisfactorily:

Lard oil, three parts, and kerosene one part. The oil should be warm, *i. e.* about 75° Fahrenheit, when the kerosene is put with it, and then shaken occasionally through the day, when it will be *cut* and mixed. This compound remains liquid some 50 or 60 degrees colder than the best lard oil. I have used it four or five months on most kinds of wood and iron working shop machinery, with better satisfaction than with any *sperm* oil I have ever found. A *larger* proportion of kerosene stands *cold* still better, and a smaller proportion gives more *body*. The same also works well for the axles of carriages, putting in more or less kerosene, according to the time of year and degree of cold.

"Liniment."—Having "broken my neck" several years ago, leaving me with a chronic spinal disease, you may guess that I have had some experience with all sorts and colors of *liniments*, but none with better satisfaction than this:

Kerosene about four parts, and lard oil (or any animal oil) one part—well rubbed in with a flannel, and bound up with the same. For any kind of muscular lameness, or rheumatism, in man or beast, try it. It is also a good external application for the *piles*.

To Kill Lice on Cattle or Colts.—Melt beef's tallow, and mix one part of the tallow with three parts of kerosene, and rub it on to those parts where the lice "most do congregate," thoroughly, once in about three days, till they have got enough, which will not be long.

Boot Grease.—Six parts tallow, two kerosene, one rosin, and a little lamp black, for fall, winter, and spring use—for summer, less kerosene. RUSTICUS.

WHITE-WINGED CROSSBILL.---*Curvirostra leucoptera.* WILSON.

The White-winged Crossbill is a much rarer species than the Red Crossbill, (*Curvirostra Americana*, WILSON,) and its habits resemble to a very great degree the latter species. It is essentially a northern bird, and it is very seldom that it ventures as far south as Pennsylvania. It is not common in Massachusetts, being only a winter visitor in that region. In the month of December, 1854, it was found in considerable numbers in Chester county, Pennsylvania.

According to AUDUBON it is not at all shy, and can be easily approached. It uses its bill and feet after the manner of the Parrots. Its food consists of cones of pine trees, upon which it is most commonly to be found. It possesses considerable powers of song, and is easily tamed.

The bill of all crossbills at first sight appears a deformity, for the upper mandible overlaps the under, but on an examination into the purpose for which it uses it (for opening the cones of the pine tree upon which it feeds,) we must admire the wisdom of HIM who made it. J. P. NORRIS.

NICE PUDDINGS.

Eight eggs—half a pound of powdered sugar—half a pound of butter—orange peel—citric acid.

Make up one pound of flour into fine puff paste, and lay it in the bottom of three pie plates, trimming the edges smoothly. Bake nearly done, but not brown; fill with the mixture quickly, and return to the oven to finish baking.

Pudding Mixture.—Beat the eggs until well broken; stir in the butter and sugar; drop in the peel of a fresh orange. Set this in a jar or tin cup, in a vessel of boiling water, and stir constantly until it becomes thick and clear. Take out the orange peel, and having dissolved some citric acid in hot water, stir it in it until the mixture has the degree of acidity that you like.

You can use any flavor you please instead of orange peel H. H.

NICE CAKES.

1 coffee cup of butter; 2 of pulverized sugar; 3 of flour; 4 eggs; three-fourths of a cup of milk; 1 teaspoon of yeast powders.

Beat the eggs well; stir into them the sugar and butter well rubbed together. Now add the milk. Rub the yeast powders into the flour and stir all together until you have a smooth batter. Bake in small tins.. H. H.

GEESE AS PROFITABLE STOCK.

Of all our domestic birds, none are so profitable as geese, where there are facilities for keeping them; for there are none which can do so much for themselves when alive, and none that come to so little waste when dead. Unlike the fowl, all parts of the goose are equally good, besides which every feather is of value, greater than that of every other of our domestic birds. Every housewife knows how to appreciate bedding stuffed with their plumage, and in these days of metallic pens the goose still possesses quills. Notwithstanding we are furnished with pens of steel and silver and gold, in profusion, "but still," says a writer, "give me in preference to all such, the quill of an old white gander; in the use of such an instrument, as firm as it is elastic, there is some pleasure in writing."

The profit to be derived from geese feathers is not anywhere to be neglected; it is now and always has been an important article, and commands a fair price. An acquaintance of the writer who is particular in keeping his feathers clean, finds a ready market at the highest price. A common goose will yield from 15 to 17 ounces, while the Bremen variety, being of larger size and always white, yield on an average from one to three ounces more feathers, and of a better quality, having more down attached to them than the common brown goose.

Recently, however, there has been gotten up a crusade against feather beds, as well as against goose quills, and the whole object seems to orignate in a conspiracy to drive from the pale of public favor the bird which produced them. It is said that feather beds produce effeminacy, and curled hair made into matresses, only is compatible with health and vigor. It is possible that there is some philosophy in this; so far as there is we do not hesitate to make the admission.

When it is considered how great pecuniary profit may be obtained by the keeping of a few geese, to the general farmer, it will be readily admitted that to the small farmer or cottager, the boon will be still more valuable, as geese are easily raised, and being graziers will require less grain-food than any other poultry, and speedily arrive at a condition for market, and command a quick sale. We feel certain that if a common degree of care and attention is adopted, they will remunerate the owner with greater profit, according to the cost of feeding them, and the labor of watching over them, than most other poultry. All the fears and anxieties to rear the turkey, and prepare it for making a proper appearance at table, are with them unnecessary; grass by day and a dry shelter at night, is all they require. They will thrive well on grass that is too short for any other animal.

Geese have been accused of poisoning and rendering the spots where they feed offensive to other stock; but the secret of this is very simple. A horse bites closer than an ox; a sheep goes nearer the ground than a horse, but after the sharpest shaving by sheep, the goose will polish up the turf and grow fat upon the remnants of others. Consequently where geese are kept in numbers on a small area, little will be left to maintain any other grass-eating creature. But if the commons are not short, it will not be found that other grazing animals object to feed after a flock of geese.

It is known that sheep will do well on pasturage that has been cropped by cattle and horses as closely as they are able to do it. Yet after sheep have gone over it, and their sharp teeth have given it another trimming, a flock of geese will find upon it luxuriant fare.

In allowing geese to run at large, it is requisite to be aware that they are very destructive to all garden crops as well as young trees, and must therefore be carefully excluded from young orchards and cultivated fields.

The best locality for keeping geese is a wide range, for where water and grass are plenty we need go no farther. Water of such size and depth as will permit at least a daily "paddle," is essential for stock birds, for here they resort as soon as they are set at liberty from the place of their night's rest, and here and then ensue the intercourse from which an increase to their numbers may be looked for, the presence of water appearing essential to the fertility of the eggs.

"All men," says an ancient writer, "must understand that except he have either pond or stream, he can never keep geese well." If we are to believe M. Parmenter, the vicinity of rivers and ponds is not absolutely necessary to the most successful rearing of geese, for in districts destitute of these advantages, a small reservoir where they can bathe will be quite sufficient.

Columella advises to pasture geese in marshy or moist grounds, and to sow vetches, millet and clover, but more particularly chiccory and lettuce, of which, he says, they are very fond. Grass they must necessarily have, and that which is moorish and unsavory for cattle.

It is believed that geese can be raised in a proper situation at a profit far greater than almost any other stock. But to do this more attention is required than is usually bestowed on their keeping and management.

Let us make an estimate of the profit of ten old geese in the manner they are generally kept by most farmers. We will suppose that the goose-keepers (for there are those who are not farmers) commence operations by purchasing ten geese in the spring before they begin to lay, at $1 each. Eight of the ten geese (for two should be ganders) will have on an average ten goslings each, but allowing one-half for paper calculation, and probably less through the season, it will leave us with a flock of fifty, old and young, worth when dressed for the market, not a dollar—the original cost—but half this sum, and you have $25. In addition to this every old goose will yield one pound of feathers, and every young one three-fourths of a pound, making in all 40 pounds, which, added to the $25, gives us $50.20. We say net profit, for there is not one goose-keeper in ten that feeds his geese either old or young, after the grass has started in the spring, until fattening time in the fall; and then their quills will often more than pay for their food.

The above calculation is made, having reference to the usual mode of managing this fowl, which is no management at all. Because, in the first place, they have generally no place to obtain their food but on the open commons, except such as they too often steal from meadows, to the great injury of the standing grass, and to the feelings of the owner, and very frequently putting their own necks in jeopardy.

But on the other hand, if the owner will provide a good warm and dry house for the accommodation of his geese while laying and hatching, and attached to this a pasture, where they may at all times have access to green grass and a small stream or a pond of water, with due attention and the right bird, which in our opinion are the Bremen, and our word for it, with only ordinary good luck, he will receive more than ordinary profit on the care bestowed and capital invested.

On the advantages of keeping geese, a writer in the Maine Farmer a few years ago said: "I once knew a couple of industrious sisters, who lived near a never-failing brook, and they generally kept through the winter thirty geese, male and female. They had erected some suitable but not expensive sheds, in which they had apartments for them to lay, sit and hatch. Their food in the winter was meal of various kinds to some extent, put principally apples and roots. In the summer they had a pasture enclosed with a stone wall, which embraced the water. They kept their wings so clipped that they could not fly over such a fence. Their owners knew what we all know, that live geese feathers are a cash article at a fair price. They picked off their feathers three times in a season. Those thirty geese wintered would raise seventy-five goslings, or young geese, and of course they had that number to dispose of every fall, or in the beginning of winter, when they are sent to market, and again picked, making four times they obtained feathers from those they wintered, and twice from the young ones that they had killed."

We tell this story to induce some family, sisters or brothers, fathers or mothers, situated near some never-failing brook or stream of water, to go and do likewise. Those remote from water cannot be benefitted by the history, yet their friends may; but if we can by this account cause one family to partake of the benefits of the business we shall be satisfied. Many families there are in all our towns so situated that they may make the raising of geese a profitable business, yet perhaps have never thought of their privileges. No one will object to keeping thirty or forty geese, if an enclosure is made sufficient to keep them at home and out of mischief.

Plucking.—Old, or what are termed stock geese, may be picked three, and, in some seasons, four times,

allowing six weeks interval, without inconvenience. Many are of opinion that it directly injures the health of geese to pick them. This operation, however, if done in a dexterous manner, and taking place just before the moulting season, a disease common to all birds, is followed by no inconvenience. One crop of feathers may be taken from the goslings, and some think it an advantage to them, but that could hardly be expected, and it should be deferred till the goslings are three or four months old before they are subjected to this operation, especially to those intended to be killed early, as they would get lean and lose some of their good qualities. Precaution should be taken when the goslings are just plucked, not to suffer them to go into the water, but merely give them drink for one or two days till the skin is closed. Food has great influence on the quality of the down and feathers, as also is the care of the geese. Great precaution is necessary; the feathers always bring away with them a kind of fat, which would give them a disagreeable smell and perhaps spoil, if this was not prevented by putting them in the oven after the bread is taken out, and keeping them in a dry, airy place. One pound of feathers is generally estimated to be the produce of the common goose; the Bremen and Toulouse will give more, and of a superior quality. Lean geese yield more down than fat ones. None but feathers taken from live geese or those just killed, should be taken to market; in the last instance they must be picked before the bird is entirely cold; the feathers are infinitely better for it.

We are not aware of any machine for picking geese; the thumb and finger must do that work. The time to do it is when the feathers are ripe, which occurs about four times during a season. It seems a cruel practice, to say the least, if we may judge from their appearance after the operation, as their drooping wings will testify. Feathers picked when green—in the pin-feather state—are not fit to be put in a bed; they cannot be cured so as to be light and sweet, as ripe feathers are.

Poughkeepsie, N. Y. C. N. BEMENT.

"STRUCK ILE"---USE OF KEROSENE.

Lubricator.—Having considerable machinery to run the past winter by horse power, and knowing of no accessible lubricator that would not grow hard in cold weather, I have been experimenting for the purpose of getting a lubricator that would stand the cold, not *gum*, be cheap, and accessible to all, and have found the following to answer the purposes very satisfactorily:

Lard oil, three parts, and kerosene one part. The oil should be warm, *i. e.* about 75° Fahrenheit, when the kerosene is put with it, and then shaken occasionally through the day, when it will be *cut* and mixed. This compound remains liquid some 50 or 60 degrees colder than the best lard oil. I have used it four or five months on most kinds of wood and iron working shop machinery, with better satisfaction than with any *sperm* oil I have ever found. A *larger* proportion of kerosene stands *cold* still better, and a smaller proportion gives more *body*. The same also works well for the axles of carriages, putting in more or less kerosene, according to the time of year and degree of cold.

"Liniment."—Having "broken my neck" several years ago, leaving me with a chronic spinal disease, you may guess that I have had some experience with all sorts and colors of *liniments*, but none with better satisfaction than this:

Kerosene about four parts, and lard oil (or any animal oil) one part—well rubbed in with a flannel, and bound up with the same. For any kind of muscular lameness, or rheumatism, in man or beast, try it. It is also a good external application for the *piles*.

To Kill Lice on Cattle or Colts.—Melt beef's tallow, and mix one part of the tallow with three parts of kerosene, and rub it on to those parts where the lice "most do congregate," thoroughly, once in about three days, till they have got enough, which will not be long.

Boot Grease.—Six parts tallow, two kerosene, one rosin, and a little lamp black, for fall, winter, and spring use—for summer, less kerosene. RUSTICUS.

WHITE-WINGED CROSSBILL.---*Curvirostra leucoptera.* WILSON.

The White-winged Crossbill is a much rarer species than the Red Crossbill, (*Curvirostra Americana*, WILSON,) and its habits resemble to a very great degree the latter species. It is essentially a northern bird, and it is very seldom that it ventures as far south as Pennsylvania. It is not common in Massachusetts, being only a winter visitor in that region. In the month of December, 1854, it was found in considerable numbers in Chester county, Pennsylvania.

According to AUDUBON it is not at all shy, and can be easily approached. It uses its bill and feet after the manner of the Parrots. Its food consists of cones of pine trees, upon which it is most commonly to be found. It possesses considerable powers of song, and is easily tamed.

The bill of all crossbills at first sight appears a deformity, for the upper mandible overlaps the under, but on an examination into the purpose for which it uses it (for opening the cones of the pine tree upon which it feeds,) we must admire the wisdom of HIM who made it. J. P. NORRIS.

NICE PUDDINGS.

Eight eggs—half a pound of powdered sugar—half a pound of butter—orange peel—citric acid.

Make up one pound of flour into fine puff paste, and lay it in the bottom of three pie plates, trimming the edges smoothly. Bake nearly done, but not brown; fill with the mixture quickly, and return to the oven to finish baking.

Pudding Mixture.—Beat the eggs until well broken; stir in the butter and sugar; drop in the peel of a fresh orange. Set this in a jar or tin cup, in a vessel of boiling water, and stir constantly until it becomes thick and clear. Take out the orange peel, and having dissolved some citric acid in hot water, stir it in it until the mixture has the degree of acidity that you like.

You can use any flavor you please instead of orange peel H. H.

NICE CAKES.

1 coffee cup of butter; 2 of pulverized sugar; 3 of flour; 4 eggs; three-fourths of a cup of milk; 1 teaspoon of yeast powders.

Beat the eggs well; stir into them the sugar and butter well rubbed together. Now add the milk. Rub the yeast powders into the flour and stir all together until you have a smooth batter. Bake in small tins.. H. H.

THE CULTIVATOR.

ALBANY, N. Y., MAY, 1865.

[From the Country Gentleman of April 20.]

☞ Our news columns are this week burdened with a dark narrative of tragedy and crime. The awful tidings which on Saturday last, so suddenly and fearfully changed our joy of victory into the deepest mourning,—tidings of the death of PRESIDENT LINCOLN, not by disease or casualty, but from the ball of the assassin,—tidings of the bloody assault on the President's chief counsellor, lying helpless and suffering,—his son and clerk both murdered in his defence,—such tidings as these, so unprecedented and appalling, well might carry a thrill of agony and horror to every heart! It was at a moment when public confidence seemed fully restored,—when the shadows of war and bloodshed seemed lifting from the land,—when every thought and intent of the PRESIDENT himself were bent on conciliation, and, with the generous tenderness of a manly heart, he was seeking to heal the wounds of treason, to recall the wandering, and save those who were lost. Spared through the harassing anxieties and responsibilities of his first term of office,—unharmed by the threats of his and the Country's enemies through four years of public tumult,—he has fallen now—in the hour of triumph, with the blood of martyrdom to seal the veneration and love in which his memory will be held sacred, as long as the history of our Republic is preserved! His countrymen of every State, and of every shade of political opinion, are brought hand in hand about the grave of their murdered Chief Magistrate, united in the bonds of a common sorrow,—as yet palsied by the blow and uncertain of the future, like an army whose leader is stricken down, or a vessel whose pilot is lost amidst the shoals! May the Ruler of our destinies, in His infinite wisdom and mercy, bring light out of the darkness in which is shrouded to human eyes, this mysterious dispensation of His will!

☞ THE NEW-YORK STATE AGRICULTURAL FAIR for 1865, was located by the Executive Committee, on the 23d inst., at Utica, to be held September 12th, 13th, 14th and 15th.

HUGH CROCKER, Esq., of Utica, was appointed a member of the Board, to fill the vacancy caused by the lamented death of ELON COMSTOCK, Esq.

American Implements, etc., in Germany.—A friend now in Berlin, from whose pen we have the pleasure of anticipating ere long a series of letters containing the results of his observations on rural life abroad—has sent us the illustrated catalogue or hand bill of CARL BEERMANN, manufacturer of Agricultural Implements and Machines, No. 8 Unter den Linden, in that city. We notice that of the various articles described *one-third* are American inventions—including four kinds of plows, a subsoil plow, a potato digger, an endless chain horse-power, a fanning mill, a root cutter, a chain pump, a garden water-engine, a meat-mincer, a sausage stuffer, two American patents in sewing machines, a washing machine, a clothes wringer, an apple parer, &c., all of the genuine Yankee type. This seems to indicate that our implements are in growing favor on the European continent.

Sale of Ayrshire Herd of H. H. Peters.—This important sale took place on the 11th of April, as advertised. We regret that we were unable to be present, as anticipated, but are indebted to H. G. WHITE, Esq., for the particulars as given below. The attendance Mr. W. states, was very large, from 600 to 800, including many prominent breeders of other States, as well as Massachusetts.

COWS AND HEIFERS SOLD.

	Name.	*Calved.*	*Purchaser.*	*Price.*
1.	Jean Armour,	May 1, 1856,	H. N. Thurber, Pomfret, Ct.,	$400
2.	Jean Armour, 2d.,	May 23, '61,	G. Heman, ——,	275
3.	Camilla,	April 19, '61,	O. F. Hubbell, Milford, Ct.,	325
4.	Dolly,	April 13, '64,	G. A. Dresser, Boston,	185
5.	Jean Armour, 3d,	Jan. 4, '64,	—— Hammond,	195
6.	Miss Miller,	Mar. 18, '56,	—— Pollard, New Braintree,	315
7.	Miss Miller, 2d,	April 2, '59,	S. Boyd, Marlboro,	305
8.	Constance,	Oct. 27, '64,	O. F. Hubbell,	200
7.	Miss Morton,	1855,	Wm. Birnie, Springfield,	155
10.	Miss Betty,	April 20, '56,	Wm. Birnie, Springfield,	140
11.	Miss Betty, 2d,	Aug. 27, '61,	J. Hodges, Providence,	125
12.	Miss Betty, 3d,	July 7, 64,	E. D. Pierce, Providence,	90
13.	Minna,	1857,	S. M. Wells, Wethersfield, Ct.,	215
14.	Rosa,	1856,	H. N. Thurber,	165
15.	Rosa 2d,	July 4, '60	H. R. Keith, Worcester,	300
16.	Rosa 3d,	June 13, '64,	W. F. Worthington,	120
17.	Miss Drew,	1857,	H. Loring, Boston,	355
18.	Miss Drew 2d,	July 5, '60,	P. Whitin, Whitinsville,	305
19.	Fanny,	May 19, '61,	R. Bradley, Brattleboro, Vt.,	220
20.	Duchess 2d,	1857,	H. N. Thurber,	405
21.	Mary 3d,	1857,	S. M. Wells,	210
22.	Blanche,	May 14, '62,	R. Taft, Nashua, N. H.,	190
23.	Nora,	May 3, '63,	L. Nichols, Boston,	150
24.	Greta,	July 14, '64,	L. Sweetser, Amherst,	100
25.	Young Merryton 2d,	1856,	S. M. Wells,	170
26.	Young Merryton 3d,	Jan. 30, '60,	J. Hodges,	195
27.	Amy,	Jan. 11, '63,	J. J. Wadsworth, Boston,	210
28.	Shepherdess,	Feb. 15, '64,	G. A. Dresser,	155
29.	Hebe,	June 15, '63,	L. Sweetser,	100
30.	Brenda,	1857,	S. Thurber,	145
31.	Flora,	1857,	Wm. Birnie,	290
32.	Flora 2d,	Dec. 2, '61,	S. M. Wells,	225
33.	Evelyn,	Oct. 24, '63,	J. Burnett, Southboro,	160
34.	Susan,	1856,	H. N. Thurber,	350
35.	Susan 2d,	April 2, '60	H. Loring,	205
36.	Dora,	July 21, '63,	C. N. Healy, Exeter, N. H.,	180
37.	Kitty,	June 18, '64,	A. Reed, Danube, N. Y.,	150
38.	Susan 3d,	Jan. 21, '63.	Chas. Hayes, Portsmouth, N. H.,	205
39.	Maggie,	1857,	R. H. Wheelwright, Groton,	155
40.	Maggie 2d,	Aug. 5, '64,	H. W. Tilton, Boston,	300
41.	Tilly,	July 6, '63,	Richards Bradley,	155
42.	Ida,	June 14, '64,	Geo. A. Dresser,	110
43.	Ruth,	1858,	G. R. Hall, Bristol, R. I.,	335
44.	Lassie,	June 7, '61,	H. Loring,	225
45.	Pink,	1857,	M. S. Scudder, Boston,	100
46.	Queen 2d,	1855,	S. M. Wells,	200
47.	Queen 3d,	1858,	R H. Wheelwright,	155
48.	Queen 4th,	March 25, '61,	H. W. Tilton,	200
49.	Juno,	Jan. 13, '63,	Jas. Herrick, Minaville, N. Y.,	180
50.	Myrtle,	April 9, '64,	H. Loring,	210
51.	Mistress 2d,	1858	S. Nichols,	350
52.	Diana,	March 11, '64,	H. Loring,	135
53.	Pea Blow,	June 4, '54,	L. E. Lane, Hampton Falls,	225
54.	Dew Drop,		L. Thurber,	320

Total for 54 head—average, $214 each, ... $11,540

BULLS AND BULL CALVES.

1.	Irvine,	1858,	Geo. A. Dresser, $110
2.	Malcolm,	1863,	H. Loring, 175
3.	Scotia,	1863,	H. McMonachan, Sussex, 115
4.	Nigel,	1864,	H. W. Tilton, 100
5.	Percy,	1864,	S. Clark, Boston, 45
6.	Hugo,	1864,	A. Reed, Danube, N. Y., 170
7.	Dorsie,	1864,	S. S. Hubbell, Philadelphia, 130
8.	Cuthbert,	1864,	A. H. Southwick, Blackstone, 70
9.	Robt. Burns,	1864,	Chas. Hayes, 75
10.	Buccleuch,	1864,	Jas. Herrick, 95
11.	Haswell,	1864,	A. G. Fitch, Holliston, 55

$1,140

TOTAL OF SALE, $12,680.

The success of this Sale is unprecedented we think in the annals of the breed, and reflects great credit upon Mr. PETERS and his management of the herd.

The farmers of the distant island of New Zealand having heard of the prolific character of the Chinese sheep, propose to make an importation of the same. We recommend them to apply to the Ohio gentleman who recently advertised in the columns of this paper.

Vermont and Europe.—A Breeders' and Manufacturers' Convention was held at Bellows Falls, on Friday, April 7th, for the purpose of securing a representation at the exhibition at Stettin, in Prussia, to be held from the 16th to the 21st of May next. Col. Needham delivered an able address, and Dr. Henry Boynton of Woodstock, and Henry Clark, Esq., of Poultney, were chosen Commissioners to attend the exhibition. Mr. Clark was also appointed a committe to solicit subscriptions to meet the necessary expenses. A number of gentlemen present, says the Vermont Record, showed their "faith by their works" and subscribed $100 each.

"If others come as readily up to the work sufficient funds will be obtained. Col. Needham clearly showed why Vermont should be represented, and no one can dispute his arguments. It was suggested that in addition to the sheep that are to be sent, a collection of Morgan horses, Brattleboro carriages, &c., be sent to the exhibition. Action must be taken quickly, as the commissioners and articles for exhibition must sail on the 29th of this month. From 12 to 16 sheep will be taken, selected from the best flocks in the State. This is a work of the utmost importance to Vermont, and it should be taken hold of in earnest."

A copy of the List of Prizes to be awarded at Stettin was lately sent to the COUNTRY GENTLEMAN, from which we may translate those offered on Merinos, as of especial interest here:

1. MERINO SHEEP WITH CLOTH WOOL.

a. Rams from and over 2 years old, *of at least Prime Fineness* [of wool], which have the highest breeding value—first prize 60 thalers; 2d prize 40 thalers.
b. Yearling rams of same category—1st prize 40 thalers; 2d, 20.
[Similar prizes for Ewes, in pens of three, of similar ages.]
c. Rams 2 years old and over, *of less than Prime Fineness*, which have the highest breeding value—same prizes.
[Classes for yearling rams and ewes as above.]

2. MERINO SHEEP WITH COMBING WOOL.

d. Rams from and over 2 years old of at least Prime Fineness, which have the highest breeding value—1st prize 60 thalers; 2d, 40 thalers.
[Classes for yearling rams and ewes as above.]
e. Rams 2 years old and over, of less than Prime Fineness, having the highest breeding value—same prizes.
[Classes for yearling rams and ewes as above.

Obituary.—ELON COMSTOCK, Esq., formerly of Oneida Co., where he edited and published for a time, in connection with Col. JOHNSON, the *Central New-York Farmer*, and more recently associated in the editorial management of the New-York World, in which he sustained an interesting and valuable Agricultural Department, died lately in this city. He had been frequently connected with the New-York State Agricultural Society and was a member of the Executive Committee the present year. He was always an earnest friend of Agricultural improvement, and rendered good service to the cause both as a writer and in his official position in various Societies. His loss will be keenly felt, not only in the immediate circle of his personal friends, but also among those who knew him more particularly as a participant in our agricultural meetings, and from his labors through the press.

THOS. RICHARDSON, Esq., of New-York, a gentleman prominent in his connection with the mercantile interests of the country, both domestic and foreign, died early in March, at the Island of Santa Croix, whither he had gone in pursuit of health. The owner of one of the most ornate and beautiful of the many expensive country seats in Westchester county, he devoted considerable attention there to agricultural matters, aside from extensive conservatories and elegant grounds; while he was also carrying on a farm of greater extent in Burlington County, New-Jersey, on which important improvements had been effected, and which is in many respects a model of perfect culture. At one time the importer and owner of one of our finest Short-Horn herds, he had of late given more attention to other stock, especially Alderneys and Cotswold sheep. His interest in Agriculture was such, and the character of his views so sound and public spirited, that his friends had anticipated for him a still more leading place among the promoters of improvement. Whenever possible he had been present at our Shows, and we had the pleasure of visiting the last Provincial Exhibition of Canada West in his company. Although frequently spending much time abroad, and himself of British birth, he was thoroughly American in sentiment, and watched our present struggle with a deep interest, and an abiding conviction of its ultimate success, which we have seen surpassed by few of the most patriotic of our citizens "to the manor born." As frank and earnest in the expression of his opinions, as he was straight-forward and honorable in business intercourse, his death is a sad and sudden blow, and leaves a vacancy that must long remain unfilled.

The Crops in Onondaga.—Hon. GEO. GEDDES writes us under date of Fairmount, April 1st: "The first day of April finds the ground nearly settled—grass and wheat starting finely. The wheat comes out from under its deep covering of snow much better than I expected to see it; in some places the heavy drifts have killed a little, and the freshet has, in some cases, scored out the ground a little while the water was running off. But April is the trying month for wheat. If the first of May finds the crop as promising as it is now, I shall be satisfied with the prospect for a crop."

Letter from John Johnston.—Mr. JOHNSTON writes us the following note, under date of Near Geneva, 10th April—the day preceding his 75th birthday:

MESSRS. TUCKER & SON—As I see little or nothing said about the prospect of the wheat crop, I write you to say that it was never better hereabout than this season. Drained and undrained, all looks well; but if one or two million of the money that has been spent on this war could have been applied to draining the land, the improvement to the country would have been immense. However, the war is over I think, and it will certainly be a long time before the South commences another war with the North. Yet I am afraid our high taxes will retard the improvement of the land, unless high prices for produce prevail, which is hardly to be expected, except when they have a great failure in England, Scotland and Ireland. A great deal has been made by fattening cattle and sheep the past winter—more than ever before; but it is almost sure to be the reverse next year, especially if feed is low, as too many will go into the business.

JOHN JOHNSTON.

Massachusetts.—At the annual meeting of the Massachusetts society for the encouragement of sheep husbandry, recently held in Boston, Thomas Motley of West Roxbury, was chosen president, C. L. Flint of Boston, secretary, and J. R. Brewer of Boston, treasurer. Among the vice-presidents elected were Dr. George B. Loring of Salem, H. G. White of Framingham, W. Henry Paine of Northampton, William Birnie of Springfield, T. J. Field of Northfield and Arthur Gilman of Lee.

The Country Gentleman.—The *Wisconsin Chief* remarks editorially:

Several times in these columns, we have commended the COUNTRY GENTLEMAN to our readers, and urged them to "own and possess" a copy of their own. We have sharpened the nib anew to say "that same" again. We want those who till the soil, whether as farmers, gardeners, or horticulturists, to enjoy with us this best of agricultural weeklies. In its typographical appearance, the variety and interest of its correspondence, gathered from all sections of the country, the ability, dignity and candor of its editorial management, it is not excelled. It is indeed a "Journal for the Farm, Garden, and Fireside." To us, a missing number is a loss, feeling assured that much of value has failed to reach us.

The Michigan Agricultural College.—We are pleased to learn from SANFORD HOWARD, Esq., that this institution has as many students as it can accommodate, and that the State Legislature has appropriated for its benefit all that was asked by its friends—$15,000 for each of the two years 1865 and 1866.

Washington Co. Wool-Growers' Association.—The Executive Board of this Association met at North Granville, March 9th, and completed arrangements for the Spring show and public shearing. It will be held two days, May 4th and 5th, at North Granville. The following classification was adopted:

1st Division—As regards Quality of Wool.
2d Division—As regards Quantity of Wool.
3d Division—As regards Symmetry of Carcass.
4th Division, and highest—As regards the above qualities combined.

Each division has five classes, *i. e.*, Ram Lambs; Rams one year or over; best pen of three Ewe Lambs; best pen of three yearling Ewes; best pen of three Breeding Ewes, two years old or over. In the first, second and third divisions, the prizes are $2 in each of the five classes; in the fourth and highest division, the prizes are $4 through the five classes, and a second prize through each class of $2. Three Judges on each class have been appointed. ISAAC V. BAKER, JR., Secretary, Comstock's Landing.

New-England.—We note a newspaper item stating that arrangements have been completed for holding the next fair of the New-England Agricultural Society at Concord, N. H., on the grounds of the Merrimac Co. Society.

Missouri.—A prominent friend of agriculture in St. Louis county, writes us: "I take pleasure in informing you that Free Missouri has now organized a State Board of Agriculture, and enclose a report of the proceedings." From this report we learn that the Board of Agriculture as now organized, is as follows:

President—HENRY T. MUDD, St. Louis Co.
Vice President—Geo. Husmann, Gasconade Co.
Treasurer—Fred. Muench, Warren Co.
Members—Dr. Geo. R. Buckner, St. Charles; Gert Goeble, Franklin; Francis Kellerman, Washington; Dr. L. D. Morse, St. Louis; Barnabas Smith, Crawford; M. T. Essex, St. Louis; Chas. A. Newcomb, Jefferson.
Secretary—John H. Tice, St. Louis.

Canada West.—The Show of the Provincial Agricultural Society of Canada West, is to be held September 18th-23d, at the city of London.

Lower Canada.—The next annual exhibition of the Provincial Agricultural Society of Canada East, will be held in the city of Montreal, on the 19th, 20th, 21st and 22d September.

The last number of the Lower Canada Agriculturist contains a list of the County Societies in that province—no less than *seventy-three* in number, with lists of officers and place of organization.

Illinois.—The Illinois State Fair for 1865, as we learn from the Secretary, J. P. REYNOLDS, Esq., will be held at Chicago, Sept. 4—9.

Otsego County.—The officers of this flourishing agricultural society for 1865 are:

President—G. POMEROY KEESE, Cooperstown.
Vice-President—Wm. I. Compton, Middlefield.
Secretary—H. M. Hooker, Cooperstown.
Treasurer—F. U. Johnston, Cooperstown.
Directors—Chas. Bates, R. H. Van Rensselaer, Jas. R. Morris, Alfred Clarke, Henry Roseboom, and John A. Rathbun.

Theron Doolittle.—If any of the readers of the COUNTRY GENTLEMAN or CULTIVATOR know of the whereabouts of one THERON DOOLITTLE, they will greatly oblige his mother by writing me a line to that effect. L. F. SCOTT. *Bethlehem, Conn.*

Brains in Farming.—The time has come when live men are wanted everywhere, to discuss the great questions of the day in relation to Agriculture and its kindred sciences. Much has been done much more remains to be done. I have been much interested of late in relation to the Correlation of Agricultural Force, so ably set forth by your valuable correspondent, D. LEE. The vast storehouse of natural forces yet to be unlocked by the hand of science, from the vegetable and mineral worlds, is inconceivable. Yet in connection with mechanism, we have a power by which we are as much benefitted. The forces inherent in all matter have a direct bearing upon the human mind. Indeed, it is built up, sustained, and strengthened materially by them, and thus in this direction are we to look for all the aid consonant with our welfare upon earth. The human machine—what wonders are pent up in all its particles! Who can know its beauties, its harmonies, or unravel the wisdom displayed in its structure? Yet who can venture the assertion that from thence comes a force greater than from all nature besides? Here is the great road to all force, ever useful in its application, ever changing, and moulding new uses and beauties from all material. The human mind is the greatest of powers. By its use the rocks melt or crumble in dust, mountains are leveled, the earth is made a paradise, the desert is made to blossom as the rose. Let all know of this power; herald it forth to all the land. Men must use brains, to use the expression of the author of "Ten Acres Enough." His farm was literally manured with brains. Who can doubt it? Look at those results, in comparison with slipshod cultivation the world over. So I shall say in conclusion, farmers of our great country, manure your fields with brains, and doubt not the result. S. V. GIFFORD. *Hudson, N. Y.*

Thrush in Horses' Feet.—I read some matters in your paper which seem to me to deserve different answers from what they get. You may recollect that about a year ago, I made inquiry for a cure for the thrush in the horse's foot. I think nobody answered through the Co. GENT. A month or two afterwards I was pleased to receive a letter from the mining districts of California in answer to my inquiry, and showing that the Co. CENT. reached that far-off country. Of all the experiments I tried, the most available one was the simplest. It may be generally known; if not it ought be—viz., first, every day, by the use of warm soap-suds, cleanse the affected parts as well as possible of the offensive discharge. Then take common dry salt, and with the blade of a knife or other instrument, press the dry salt as deep as possible, and plentifully, into the crevices from whence the offensive matter flows. By following this attentively for a long time, I have cured the worst case I ever saw. I think it will cure any case of the kind. An old Englishman looking for work, told me of this method of cure, and if I could find him now, I would present him with the new coat which he at that time evidently needed very much. H. DODGE.

How to Cleanse a Cistern.—Another simple thing I have accidentally learned; and it too, if not generally known, ought to be, relating to stagnant, odorous water in cisterns. Many persons know how annoying this sometimes becomes. After frequent cleanings and other experiments, all to no positive permanent utility, I was advised to put, say two pounds of caustic soda in the water, and it purified it in a few hours. Since then, when I tried what is called concentrated lye, I had quite as good a result. One or both of these articles can be obtained at almost any druggists. H. DODGE. *Buffalo, N. Y.*

Hog-Pens.—I would say to all persons intending to build a new hog-pen not to build a granary over or adjoining it, as I have known two cases where grain stored in such places has become so impregnated by the effluvium of the hogs as to be unfit for human food, and I doubt the propriety of making hogs eat grain so saturated with the steam arising from their wet and warm apartments, and I doubt if pork thus fattened can be fit to eat, in such damp and dark rooms, where the sun and winds have no purifying influence. A hint may be sufficient. S. MASSEY. *Watertown, N. Y.*

Wilson's Albany Strawberry.—At a meeting of the Horticultural Club of New-York last week, in answer to an inquiry for the best strawberry, Mr. Pardee and Solon Robinson both said "that, all things considered, they had never found an equal to the Wilson, which is never objected to on account of its acidity if allowed to become fully ripened."

Inquiries and Answrs.

Durability of Seed.—*J. E. P., Worcester, Mass.* Nearly all seeds are best when fresh, and they gradually lose their power of vegetating with age. Books on gardening state the number of years each kind of seed retains its power of germinating, but such tables are inaccurate, as the period does not suddenly cease, and they become gradually more and more dormant.

Top-Dressing with Lime. — *J. E. P.* Orchards may be top-dressed with lime at any time of the year. The lime should be pulverized aud evenly spread, and not in lumps.

Hubbard Squash.—*R. H. D.* The Hubbard Squash is green outside and yellow within—a good keeper in winter, and sweet and very rich in quality. If the kind our correspondent has, meets these points, it is doubtless true to name.

List of Pears.—*T. H. B., Indianapolis.* The following is a good list of pears, nearly in the order of ripening: Doyenne d'Ete, Giffard, Rostiezer, Tyson, Bartlett, Seckel, Flemish Beauty, Buffum, Louise Bonne de Jersey, Howell, Sheldon, Diel, Lawrence, Winter Nelis.

Cement for Cellars.—I want to cement my cellar bottom. It is wet when the water rises. Will cementing it keep the water back? There is no drain. What kind of cement is the best? A Subscriber. [Where practicable a good drain should be provided for every cellar, unless it has a natural discharge. The water may be kept out however, by lining the entire sides and bottom with the best water lime cement like a cistern. The best Rosendale cement, or any other which has been proved equally good, may be used for this purpose. The sharper and cleaner the sand, the more perfectly it will harden.]

Tan Bark for Manure.—Can you or any of your patrons inform me if spent tan-bark can be made available for manure in an economical manner. I want to plant two or three acres of onions next year, and want to prepare manure for it this summer; have to buy all the manure I shall use. J. A. D. *Poughkeepsie.* [Tan-bark is of little value for manure, except as forming vegetable mold, and for this purpose it should be well rotted down. In this state it forms an excellent compost with common manure. The addition of a small portion of lime is useful. But lime will not make a manure with tan, until it is rotted down.]

Feeding Roots.—I have two two-year olds that I am trying to fatten on mangolds and white carrots. Is half a bushel per day too much for them, and will carrots and beets fatten them without meal? They are growing, but I must get rid of them by the first of May. M. J. F. [Carrots and beets are a good feed for all cattle—the amount must be gradually increased, and when accustomed to it, half a bushel a day is not too much. The addition of a quart of meal at each feeding would be a great help. It is a mistaken notion to suppose that any animals can be well or speedily fattened on high feeding—it must be by continued feeding.]

Animal Manure.—Will it pay to collect what we farmers denominate deacons—that is calves killed at three days old—for making compost? Within a circumference of three miles there can be about a thousand collected. Now I would like to know whether it will pay me to collect them, and what is the best way to compost them—I have plenty of muck—and what proportion of each. A Subscriber. [These dead animals if easily collected, would form a compost worth more than the cost of labor, by placing them in alternating layers with peat, muck, loam or turf—one-half or two-thirds of the latter. A soil which contains much clay has more absorbing power, and need not be in so large quantity as a lighter soil. After remaining thus six months or a year, the heap may be dug over or mixed, and applied to the land; the flesh having disappeared and been absorbed, the bones which are left may be easily broken up.]

Fruit Trees for Shade.—I intend setting out some trees for shade, beside the highway, this spring, and propose planting some 40 pear trees, the balance cherry trees. Will you name a few of the best varieties for my purpose of both kinds, including early, medium, and late? The first requisite being thriftiness and beauty of tree, and then quality of fruit and productiveness. Would trees be more thrifty procured from a different latitude, either farther north or farther south, or are they as good procured from nurseries in this vicinity. L. L. Wood. *Vineland, N. J.* [Among the handsomest growing pear trees, that bear fruit of excellent quality and grow rapidly, are Buffum, Howell, Flemish Beauty, and Washington. Skinless is also a rapid grower, but not quite so symmetrical in form. Urbaniste is a handsome tree, but grows rather slowly. Jaminette is a fine grower. Among cherry trees of good form, are Black Tartarian, Burr's Seedling, Coe's Transparent, Napoleon Bigarreau, Downer, Reine Hortense, and Black Heart. A difference in latitude for procuring trees is not essential, provided they are good and healthy.]

Seeding to Grass.—A subscriber wishes to know the best crop to sow for seeding down a rich corn stubble to grass. We have been most successful with barley sown thin, or at the rate of a bushel or a bushel and a half to the acre. If the grass seed is properly brushed or rolled in, or sown on mellow ground just before a hard shower, it scarcely ever fails of success. Spring wheat is next best, and lastly oats—all of which should be sown rather thinly.

Cisterns above Ground.—Please inform me if a cistern built of brick above ground, and eighteen inches or two feet of saw-dust put around it, and the top covered with straw to keep from freezing, would not be better than to build below ground and have to pump it? A Subscriber. *New-Haven Co., Conn.* [A cistern above ground, built of brick, would require very strong walls to keep from bursting. For example, one six feet high and eight feet in diameter, would present one hundred and fifty square feet of surface of side walls, against which the water would press when full equal to an average head three feet high, or about a pound and a half for every square inch, or equal to thirty thousand pounds on the whole surface, or thereabouts. Casing the walls in straw would not be ornamental. It would be a decided advantage to be able to draw the water for cattle without pumping. The only way would be either to place the cistern on a hill or mound, or else to throw up a broad sloping earthwork around it.]

Grass in Shade.—Can you through the columns of your paper, give me some information about getting grass to grow in a woods where the trees have been trimmed up and under-brushed. Is blue grass a good grass? The soil is clay and wet in places. What time of the year should blue grass be sown, and where can I get it? Oliver Williams. [It is difficult to have a good, well-matted turf where there is much shade, especially if the trees drop many leaves on the surface. In a thin shade, or where the trees are scattered, there is not much difficulty. The orchard grass grows best under trees, but is coarse and entirely unfit for a lawn. Next to this is the June grass, (*Poa pratensis,*) known as the blue grass of Kentucky, which forms a handsome turf during the early part of the season, but should be mixed with other grasses for autumn. The seeds of these grasses can probably be obtained of Thorburn & Co. of New-York, and other principal agricultural seed stores. Sow the seed as early in spring as the soil is dry enough for the pulverization of the surface, and brush or roll it in.]

Caloric Engines.—In answer to a correspondent, these engines have not been advertised of late to our knowledge, and we cannot give the address of their manufacturers. They are better adapted for *constant work* of a very light character, such as pumping water, &c., than for use where the power required is larger, and some saving of fuel is not so important—so far as our examination of the subject entitles us to express an opinion, and where the work contemplated would necessitate as much as six or eight horse-power, we should be inclined to prefer a Portable Steam Engine.

Colts Gnawing their Halters. — A subscriber wishes to know how he can stop a colt from gnawing the hand-piece to his halter. If he will take one fourth of a pound of copperas, dissolve it in one quart of water, and thoroughly saturate the hand-piece to his halter, I do not think he will have any more trouble. J. L.

Not a Marl.—I have a little place in New-Jersey, some ten or fifteen miles from the green marl deposits. About half a mile from my place is a deposit or stratum of a substance resembling putty, both in looks and consistency. You can work it in your fingers, and I have no doubt could put window glass into a sash with it, as well as with real putty. When dry it can be easily pulverised, and is as fine as flour. Now is it marl, or what is it? If it is a fertilizer, it ought to be put to use. Can you give any information? A Subscriber. [We enclosed the foregoing inquiry to Prof. Cook of the New-Jersey State Geological Survey, who favors us with the following

reply:—"The deposit spoken of is not marl—neither greensand—nor calcareous marl. The description is that of some varieties of clay which abound within 10 or 15 miles of the greensand. I should not think it a fertilizer in the proper sense of the word, though it might be put to a good use in improving sandy soils."]

Heaves in Horses—Grain for Milk.—1. Is there any remedy for "heaves" in horses? 2. What is the best grain to produce milk in suckling animals—oats, corn or rye? A SUBSCRIBER. *Mt. Vernon, O.* [1. Heaves in horses is generally regarded as incurable, and this opinion is not far from correct. The disease is always much mitigated by succulent food—hence dry fodder should be cut short and soaked or moistened with water. In rare instances the disease in its early stages has been cured by mixing grease or lard in small quantities with the food. In one instance we knew a cure entirely effected in a young horse by compelling him to drink the greasy water from washing dishes, with a portion of refuse milk, given for some years. In the course of time he became fond of this drink, and preferred it to any other.—2. The meal from either of the grains here mentioned, if *regularly*, and moderately fed, will increase the milk of cows; but if well moistened or scalded, or rather made into slop, the quantity will be much augmented. All succulent food increases most the bulk of the milk, good fresh grass the most so of all. For making butter corn is best, and for cheese bean meal produces the largest amount.]

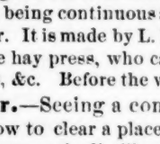
Bullard's Hay Tedder.—I see in the CO. GENT. an advertisement and sketch of a machine for spreading hay by horse power. Can you inform me whether this, or any other plan of machine for spreading hay by horse power, has been used and approved of by any considerable number of farmers? I think the plan and mode of operation of Bullard's machine is not the best for the purpose in view. E. K. W. *Baltimore, Md.* [Bullard's Hay Tedder has been used to a considerable extent for the past two years, and, so far as we have heard, with universal satisfaction.]

Live-for-Ever.—There is one field in my farm that is completely overrun with Live-for-ever. Can you or any of your numerous subscribers inform me through the Co. GENT., how to effectually get rid of it? It was plowed up last season and planted to corn and thoroughly worked. This spring it has come up as strong as ever. EDWIN THORNE. [Probably the best way, if the patch is small, is to spade it under, and thus smother it; if extensive, plow it under with a double Michigan plow, with three yoke of oxen or corresponding horse team. If any of our readers know a better mode will they please give it?]

Cattle Shed.—How large a shed would be required to shelter 100 sheep and 50 heifers, both summer and winter, open on the south, and built around the other three sides of the barn yard? [Where the animals run loose or promiscuously together, a good deal will depend on the size as well as temper of the animals. Fifty cattle should have a yard with an area of 15 or 20 square rods, more or less,—and 100 sheep about 10 square rods.]

Rotary Sweep.—A correspondent in the number of the Co. GENT. for July 28, 1864, speaks of Dederick's Rotary Sweep used with a horse fork. Will some one describe it? M. *Yates Co., N. Y.* [The rotary power for pitching hay obviates the necessity of backing the horse at each successive unloading of the fork, his motion being continuous and circular, like that of a sweep horse-power. It is made by L. DEDERICK of Albany, the manufacturer of the hay press, who can give the necessary information as to price, &c. Before the war it cost about $50.]

A Rat Destroyer.—Seeing a communication in CO. GENTLEMAN asking how to clear a place of Rats, I give you our experience. Having a grain distillery, with always a large quantity of rats, we cleared our place as follows: We bait fish-hooks, of the size of accompanying sketch, with dried beef, not too large, but just the size for a rat to swallow; place in a secure place from dogs, chickens, cats, &c., and in a few days you will hear a great commotion of rats vacating; they get them in the mouth and stomach, and cannot get them out, and they convey the information to the rest. Y. P. M. *Philadelphia.*



Tarring Seed Corn.—I notice an inquiry in the last number of the COUNTRY GENTLEMAN about tarring corn to prevent birds from taking it up. In answer I would say that I have used both kinds of tar for that purpose, but for the last 10 years have preferred gas or coal tar, because it is much more easily applied, and equally safe. If the corn is made jet black with it, it may not grow, but there is no occasion for that. Take a paddle and dip from the tar to the corn once or twice, then stir till the corn is all coated, and appears through the tar of a yellowish brown color. It may easily be tested by throwing a little to the poultry. The crow blackbirds mostly have about twenty nests in the pine and cedars of my yard each spring; but if my planted corn was tarred, (which is generally the case,) I have not the slightest objection to it. They gather Maydukes and other early cherries though, a little too fast.

Medford, N. J. G. HAINES.

Fences for Flooded Lands.—The recent flood having swept away some thousands of miles of fences in the Middle States, the question arises, can farmers rebuild in any manner with material not liable to float away? Can a wire fence be made by securely anchoring the posts, that will turn cattle and withstand the flood in places not exposed to be swept by drift-wood? I understand that the expansion and contraction to which iron is subject from the changes of the weather, has been an obstacle to making durable wire fences. Can that difficulty be in any manner obviated? I should like to have some attention given to this matter of fences subject to overflows, in your paper. Will not your readers contribute their experience? B. LAPORTE. *Asylum, Pa.*

Thrush in Horses' Feet.—I notice in number 12 of the Co. GENT., a remedy for thrush, viz., salt, which is very good. H. Dodge says—"after continuing it a long time, he perfectly cured the very worst case he ever saw." Now if he had thoroughly soaked his horse's feet in strong cider vinegar after cleansing them nicely, and *then* packed them with salt, a very few applications would have done the cure. I cured the worst case of thrush I ever saw in one week, with only three applications, and have never known it to fail of effecting a speedy cure. The vinegar neutralizes the offensive discharge; the salt cleanses out the foot, and the thing is done.

NASHUA.

New-Jersey Marls on Long-Island.—The astonishing effects of the New-Jersey marls in renovating the worn out lands of that State, have long been known. I am desirous of learning whether this manure has ever been tested upon the soil of Long-Island, which, in its composition, is very similar to the sandy loams of New-Jersey. The great marl beds lie very convenient for the carriage by water of the fertilizer, to both sides of the Island. If it should be found to act there as favorably as in our sister State, it is easy to see what a large market would soon be opened up for the marls. The present high price of all fertilizers is operating very much to the disadvantage of farmers, and every new source of supply should be carefully cultivated. It would seem probable that the use of marl in greater or less quantities must have been tried on Long-Island. If those who may have experimented with it, will communicate the result of their observations as to its effects, a great favor will be conferred on a

Brook Haven, L. I. LONG-ISLAND FARMER.

"Hall's Yankee Farmer." — In answer to inquiries, I would state that I sold no machines last year, and have none for sale now. It continues to be my chief implement. It worked last year eighteen acres tobacco, 10 acres potatoes, three fodder corn, five field corn, three acres carrots, &c. I could not otherwise have done the work as cheaply or as well. I have made some changes in it to reduce the weight and draft. As to the perfection of its work, I believe it unequalled. If any better principle of planting, drilling, cultivating, or potato digging are brought out, I shall be glad to substitute them. As yet I don't know that it can be equalled in any of its operations. It is, however, yet more unwieldy and ill-looking than any of the planters, cultivators, &c., on sale. I invite attention to its work on my farm this season.

Elmira, N. Y. S. W. HALL.

Egg Hatching Machines.—Can you recommend a good egg hatching machine? J. N. G. [The only one we can thoroughly "recommend," and that we do most cheerfully and from long experience, is a faithful hen.]

Gas Tar for Seed Corn.—None of the readers of the Co. GENT., need fear the use of gas tar to prevent crows pulling up corn. I have used it for ten years successfully. The modus operandi is this: Put about a peck of seed corn in an old tub or keg; pour warm water on and stir. When the grain is all warm, pour the water off; then stir the hot corn with a tarred stick till each grain has received a *slight* coating of the tar; then sift on dry ashes or plaster, and stir till the grain separates ready for planting. E. OLIPHANT.

Bones.—Is the decomposing of bones by ashes and lime, as good a way of preparing them for use as grinding? M. [More experience is needed in preparing bones for use. Using ashes and lime answers a good purpose, perhaps as good as any, if the volatile parts are retained by a covering of loam or other absorbent.]

HOW I CULTIVATE THE DAHLIA.

I have just read in the Co. GENT. of March 30th, a note on dahlias and pansies. Your correspondent speaks of having failed in the cultivation of the dahlia, &c. I presume that others rarely have the success in its cultivation that they desire, and as my method is quite simple and successful, I propose to give it in detail for the consideration of your correspondent and other readers of the COUNTRY GENT., inviting them to try it.

In the first place, I keep my dahlias in boxes in a dry cellar, open and exposed to the air. In this way they never mold. They will dry some, but this will not injure them. I bring them out the first of April and start them in wet sand. As soon as they sprout I divide them, and either pot or put them in boxes, keeping them in moist sand until I set them out, which I do the first of June.

In its cultivation for the past five or six years, I have given special attention to various soils, and have proved to my satisfaction that a rather poor and somewhat sandy soil, moderately enriched with well decomposed vegetable compost, is best suited to the dahlia. I make use of leaves, turf, dahlia tops, and any light litter from the garden. It is a good plan to gather these things into a heap. In one year's time it will make a nice compost to mix with the soil.

For both tubers and potted plants, I dig holes, and put into each about a quart of muck, enough to thoroughly line them. Inside of this I put a portion of clean sand, with which I entirely encircle the root or tuber. The sand will preserve the roots from rotting, also from insects. The muck will keep them moist. The little rootlets or feelers will penetrate through all this, and draw what nutrition the plant requires for blooming, and at the same time be prevented from too rank a growth of stalk and leaves. New roots grown in this way will keep much better through the winter, and flower better the ensuing season. I have tried various other methods with partial or imperfect success. In this I am always sure of the most satisfactory results.

PANSIES.—I make it a rule to throw out of our grounds all diminutive or imperfect flowers as soon as they appear. If this, with the other conditions mentioned, are attended to, pansies will not deteriorate.

Oneida Commune. MRS. E. G. HAWLEY.

BARN CELLARS FOR STOCK.

MESSRS. EDITORS—A correspondent inquires about underground barns for stabling, and if my experience is worth anything to any one, they are welcome to it In 1861 I built an underground barn, and have used it ever since with almost perfect satisfaction—the only drawback being the water trickling down the walls when the snow is going off, and the frost coming out of the ground—then the ground is open or the earth-conductors filled with ice. At such times and no other, the stalls near the walls are damp; but my stables are so arranged that but two stalls come near the walls. The barn floor runs lengthways of the barn, and the root cellar is under the floor, and next to the main wall. This is 12 ft. wide; the next 12 ft. is a row of stables heading towards the cellar, and fed from the floor above or roots from the cellar; the next 12 ft. is an open shed fronting the yard, but still under the main barn, and is used for manure thrown out from behind the cattle through swing doors, 16 inches wide, extending from post to post, and shut down only when the weather is very cold, thus giving a free circulation of air up through the feed-hole over the mangers, which are never closed, cold or hot. These stables are always dry, well ventilated, and as healthy as any man or beast can wish for, and as handy as need be. The space where the manure lays, or rather the yard, is one foot lower than the floor of the stables which lay on the ground. But we will now turn to another picture: My barn is built on the very top of a small hill or knoll, and is dry, gravelly land, everything running away from the barn; I have visited many barns that were built on, or rather in a hill-side, with moist, high ground above them, and nine months in the year soak water is running into the underground part or basement, which keeps it damp, chilly and unhealthy in spite of all ventilation. When I open a stable door and step in, and a damp chill comes over me, I think it is no place for anything to be confined any length of time. L. F. SCOTT.

Bethlehem, Ct.

Illustrated Rebus—No. 11.

Illustrated Rebus—No. 12.

Illustrated Rebus—No. 13.

Illustrated Rebus—No. 14.

ANSWERS TO ILLUSTRATED REBUS.—No. 7. "Hold inviolate what you assent to in all understandings."—No. 8. "To accumulate wealth use all honest and honorable efforts, but regard over-reaching as infamous."—No. 9. "City belles and beaux underrate cultivators of the earth, and cannot understand domestic happiness."—No. 10. "The New Rochelle Blackberry bears in profusion when shortened in properly." (The gnu-row-shell-black-bear-e bears-in-profusion w-hen, &c.)

Experiments with Salt as a Fertilizer.

EDS. CO. GENT.—Agreeably to your request we send you an account of our experiments in the use of salt as a manure.

Our farm is situated geologically on the upper measures of the Hamilton group of shales, probably a trifle below where the Tully limestone makes the dividing line between the Hamilton group and the Genesee Slate. The Tully limestone is not found in place on our ridge, and Mr. Geddes supposes that the lime, at the time of its deposit was absorbed in the clay slate, and in support of this theory is the fact that all of the spring water is hard, and some of the layers in our quarries are very hard, and of a bright blue color.

Our soil is composed principally of this rock, in a thoroughly disintegrated state, mixed with a very little drift deposit, and forms what is considered in this region a clayey loam. The fields are well drained, but not what is usually termed thorough-drained.

Our farming operations are governed somewhat by the altitude of our situation, which we suppose to be about 1,650 feet above tide—Pompey Hill, about two and a half miles south of us being 1,743½ feet. Great portions of the farm, if indeed not all of it, were once cultivated by the French or Spanish from two hundred to three hundred years ago. Some portion of it was cleared by the present race as early as 1795, and the last was cleared in 1835.

We first sowed salt as a manure in the spring of 1861; mixed three bushels of salt with one of plaster, and sowed of the mixture three bushels to the acre. Sowed it broadcast, from three to ten days after the grain was sowed; did not harrow or roll afterwards.

A field of spring wheat of ten acres yielded twenty bushels to the acre, while a neighbor's field, merely across the road, of equally as good soil, and as well cultivated, did not produce over five bushels to the acre. The ground was plowed and the seed sown on the same days.

Another field of our own we partially sowed in strips of one rod in width, sowing and skipping alternate strips. The soil in this field was in better condition than the first field; still, taking the whole field, it did not yield more than ten bushels to the acre. The six or eight strips that were salted were taller, heavier, longer headed, better filled, plumper berry, ripened earlier, and brighter straw. The salted and unsalted portions were as easily distinguished as the strips in a carpet, and in binding the grain behind the cradle any man could have told the difference blindfolded.

In 1862 we tried the mixture on barley, peas, oats and winter wheat. The effect on barley was astonishing. We left a strip of land a rod in width across the field that we did not cover. Here the barley was so small and thin, and crinckled down, that the machine could not cut what little there was; while the whole field yielded over forty bushels to the acre.

Another field on another part of the farm was nearly as good, although in 1856 it absolutely refused to give us more than ten bushels to the acre, and we stopped raising it.

On the oats we had no opportunity of testing it with any near us; we salted the whole field, and had the largest crop we ever raised. On peas we had no opportunity to test it with others, had a large crop, but the vines grew too long. On winter wheat thought it did great good, but had no chance for a decided test

In 1863 we sowed two fields of barley; upon the side of one we left an acre unsalted, and the crop on this portion was not half as great as on that portion to which the salt was applied. This field was a heavy sod; the other field was the one on which barley and peas were sown the year previous; had an excellent crop, but no particular test.

In 1864 we covered two entire fields of barley with the salt and plaster; the great drouth did not seem to affect one field, the first one sown, but little; but the other one was greatly injured. We had heavier crops than our nearest neighbors, but no better than some within a mile of us.

We think that the increase in the value of the straw more than pays the cost of salt, as a manure, and its application. SWEET BROTHERS.

Onondaga Co., April 6, 1865.

Are Italian Bees as Hardy as Black Bees?

Propagators of the Ligurian species claim them to be more hardy than the common bee, and we have never seen their statements called in question. The writer has had a little experience the past winter, that leads him to question the truth of the assertion.

He wintered fourteen stocks in the open air, in double hives with top ventilation—thirteen in Langstroth hives, and one Kidder's Compound Hive. No air was admitted at the bottom, except what might enter through the joints of an unplaned outer hive or case. The hives were examined at different times during the winter, and found quite free from dampness or frost in the breeding chamber. Three hives were ventilated by leaving the honey-board off; the remainder by leaving about one-half of the holes in the honey-board open. All were good strong stocks. Out of the fourteen, two died of starvation with plenty of honey in the hives. The cold chilled them, and they were unable to change their location when they had consumed the stores in their immediate vicinity.

One of these stocks was a pure Italian, and extra strong in numbers. It was ventilated by leaving one-half the blocks off the honey-board, and the combs were found dry and free from frost. The other stock was a hybrid; the queen a pure Italian, mated with a black drone. The condition of the hive similar to the Italian. One stock of the twelve remaining was a hybrid, produced by the mating of a black queen with an Italian drone. This stock, and ten stocks of black bees, came through strong and vigorous. Out of the fourteen stocks one remains to be accounted for, and this was a full Italian, and lost full two-thirds of its numbers—suffering nigh unto death—but now commencing to breed vigorously.

From the foregoing it will be seen, that of the stocks that died one was a pure Italian, and the other a hybrid, and the only remaining stock that suffered severely was also a full Italian. Has anybody else had similar experience? Let us hear both sides of the question.

It is possible that the Italian or Ligurian bee may prove sufficiently hardy for the latitude of Southern New-York, Ohio and Illinois, but not for our more northern regions, where the thermometer sinks to 25 or 30 below zero, without giving them extra winter protection. Isolated cases should not be too confidently relied upon, and I hope all will give us the benefit of their experience. L. L. FAIRCHILD. *Rolling Prairie, Wis.*

Baked Beans without Pork.

Excellent in taste, easily digested, good for dyspeptics, free from swinish flavors. Soak a quart of beans in water over night; draw the water away; boil in clean water until soft; put in a baking dish with a lump of butter the size of an egg; salt and pepper, and bake as usual.—*Middlebury Register.*

DRAIN TILE MACHINES.—The undersigned having relinquished the business of the manufacture of Drain Tiles, will dispose of their machines at a low rate for cash. Address C. & W. McCAMMON,
April 20—wtfm1t. Albany, N. Y.

DO YOU WANT WHISKERS OR MOUSTACHES? Our Grecian Compound will force them to grow on the smoothest face or chin, or hair on bald heads, in six weeks. Price $1. Sent by mail anywhere, closely sealed, on receipt of price. Address WARNER & CO.,
April 20—w&m3mo. Box 138, Brooklyn, N. Y.

SUFFOLK PIGS.—Six weeks old; per pair, $25; single ones, $15, boxed and shipped, for sale by
T. L. HARISON,
April 6—w8tm2t. Morley, St. Lawrence Co., N. Y.

THOROUGH-BRED DEVONS—From choice stock. Some fine Dairy Cows and their progeny for sale, all having an *approved record*. Send for a printed Catalogue, with pedigrees and prices. P. M. AUGUR,
March 2—w&mtf. Middletown, Ct.

GOODRICH SEEDLING POTATOES by mail, prepaid, for 25 cents per pound. GARNET CHILI, CUZCO and PINKEYE RUSTYCOAT, per barrel, $3.50. Circulars free. P. SUTTON,
March 23—w3tm2t. Ransom, Luzerne Co., Pa.

PURE BRED CHESTER COUNTY WHITE PIGS, PRINCE ALBERTS and SUFFOLK PIGS for sale. Apply to R. L. PELL.
March 30—w5t. Esopus, Ulster Co., N. Y.

SHORT HORN BULL FOR SALE.

Mosstrooper,

5025, bred by Samuel Thorne; calved Feb. 24, 1860; got by "2d Duke of Thorndale," out of "Minewawa," by "Neptune," &c. Color red, with a little white; gentle disposition, and in good working condition—weight, 2,500 pounds.
March 16—w4tm2t. C. I. HAYES, Unadilla, N. Y.

THE BUCKEYE HORSE-HOE

Makes Labor Light.

Enclose Stamp for PERPETUAL ALMANAC, with cut, price, &c. HEMAN B. HAMMON, Patentee & Manufacturer.
April 13—w&m1t. Bristolville, Trumbull Co., Ohio.

ALBUMS FOR THE

MILLION.

We send our **16** picture

POCKET ALBUM,

by mail, postpaid, for **75** cents, and our **24** Picture Album for **$1.** JUST THE THING for

SOLDIERS.

SAMUEL BOWLES & CO.
ALBUM MANUFACTURERS,
Springfield, Mass
Mar 16—w3tm2t.

BOARDMAN & GRAY'S

Patent Improved

Insulated Iron Rim and Frame

PIANO FORTES.

MANUFACTURED BY

WILLIAM McCAMMON,

(Successor to BOARDMAN, GRAY & Co.,)

Albany, N. Y.

☞ SEND FOR ILLUSTRATED PRICE LIST. Mar 23—w&m.

"RURAL AFFAIRS."

THREE VOLUMES.

Over Thirteen Hundred Engravings.

One Thousand Pages of Reading Matter.

Some of the subjects treated in the three Volumes entitled "RURAL AFFAIRS," (price $1.50 each, by mail, postpaid, or $4.50 for the set) are comprised in the following partial abstract of their contents:

1. **Country Dwellings.**—FIFTEEN DESIGNS in Vol. One; TWENTY-SEVEN DESIGNS, and a full outline of "a Complete Country Residence" in Vol. Two; SIX DESIGNS of Working Men's Cottages in Vol. Three, also complete directions for building One, Two and Three Story Buildings on the "Balloon" system, and an Illustrated Glossary of Architectural Terms.

*** In this Department, RURAL AFFAIRS is one of the most valuable works published, including nearly 250 illustrations, with estimates of cost, Rules for Planning and Building, etc., etc.

2. **Laying Out Grounds.**—Articles on Laying Out Farms, on Pleasure Grounds and Gardens, and on Modes of Planting, in Vol. One; on Ornamental Planting, with Nine more Plans, in Vol. Two; on Garden and Green House Arrangements in Vol. Three. Largely illustrated, with much practical information.

3. **Farm Buildings.**—Plans and Descriptions of Barns, Carriage-Houses, Piggeries, Poultry Houses, Smoke Houses, &c., in Vol. One; EIGHT DESIGNS of Barns in Vol. Two; FOUR in Vol. Three—about 130 engravings in this department, which every Farmer might consult to advantage.

4. **Practical Agriculture.**—Among many valuable articles in all the Volumes, Mr. THOMAS' Illustrated Prize Essay on FARM MANAGEMENT; the chapter on UNDERDRAINING; the Essays on GRASSES, and the WEEDS, &c., are complete treatises, in small compass, on the subjects to which they are devoted.

5. **Fruits and Fruit Culture.**—Few works on Horticulture contain a similar amount and variety; nearly 250 varieties concisely described in Vol. One, with twenty-two shorter articles; a large number of articles, some of considerable length, in the other Volumes, with innumerable shorter notes derived from the Author's long and successful experience. This department includes over 250 Engravings.

6. **Domestic Animals.**—The Principal Breeds; Doctoring Sick Animals; General Management at all Seasons. Also the POULTRY YARD, including a full treatise by C. N. BEMENT, and the APIARY, including the care of Bees. Largely Illustrated.

7. **Flower and Vegetable Gardens.**—Laying Out and Management; Green-House and other structures; Rustic Work of all kinds; New and Desirable Plants, &c., &c.—also HEDGING and HEDGES.

8. **Farm Implements, etc.**—Twenty-three articles in Vol. One and many others in Vols. Two and Three—also a complete chapter on FARM FENCES and GATES—on CISTERN BUILDING, Construction of LIGHTNING RODS, etc.

9. **Butter and Cheese Making.**—Several articles, with Designs of Dairy Houses, and practical directions in detail, including the experience of many of our best Dairy Farmers.

10. **Rural and Domestic Economy.**—Under this general head may be classed a variety of subjects of out-door or in-door interest to every resident in the country, far too numerous to specify at length.

The foregoing reference to some of the most important subjects treated in these Volumes, does not include a large number of very important and admirable chapters—such as that on INSECTS INJURIOUS TO THE FARMER, by Dr. FITCH, with 34 Engravings, and that on the GROWTH OF PLANTS and Vegetable Physiology, with 61 Engravings.

The volumes are sold either separately or together at the price above named. As Premiums by Agricultural and Horticultural Societies they are excelled by no books now before the public; and Agents will find them command a ready sale. A liberal discount will be given where any quantity is purchased. Address the publishers,

LUTHER TUCKER & SON.
COUNTRY GENTLEMAN OFFICE, Albany, N. Y.

NEW-YORK STATE TILE WORKS,

NEAR THE CORNER OF

LARK & LYDIUS STREETS, ALBANY, N. Y.,

WM. M. BENDER, Proprietor. | **GEORGE JACKSON,** Superintendent.

The Subscriber is prepared to furnish, Round, Sole and Horse Shoe Tile, over one foot in length, by the cargo, or in the smallest quantity on demand, at prices that he will defy any other parties to undersell him. He will warrant his tile hard burnt, and to fit close at the joints, and altogether superior to any made in the United States.

All tile delivered on board of cars or boat in this city free of charge. Price list sent on application.

Also DRAINING TILE MACHINES for sale of the latest improved patterns. For further particulars address as above.
April 6—w&m.

SHORT-HORNS, AYRSHIRES

And Alderneys—for Sale by

Feb. 18—wtf. C. I. HAYES, Unadilla, Otsego Co., N Y

CONTENTS OF THIS NUMBER.

The Farm.

Prize Essay—Cultivation of Turnips, by Wm. Anderson, 137
Agricultural Statistics of the United States, 139
Manure the Farmer's Capital, by Jno. R. Blair, 142
Growing Clover—Is there Danger of its being Overdone, by F., 143
Cornell University, 144
Syrup and Sugar from Sorghum, by J. R. Webb, 145
Sorghum in Maryland, by W. R. Massey, 145
Experiments with Kohl Rabi, by A. C., 146
Hay Sweep, by M. B., 147
Plowing Weedy Stubble, &c., by John Kelsey, 147
Chicago Grain Market, 148
Sweet Potato Culture in New-Jersey, by J. C. Tatum, 150
Top-Dressing Meadows, 151
Corn Marker, by H. Hollister, 153
Growing Oats, by F., 156
Sure Remedy for Onion Maggot, by M. L. Whitlock, 156
Culture of Parsnips, by F., 157
Notes for the Month, 160
Death of President Lincoln, 160
Brains in Farming, by S. V. Gifford, 162
Inquiries and Answers, 163
Experiments with Salt as a Fertilizer, by Sweet Bros., 166

The Grazier.

Mutton Sheep—Cardinal Points in their Management, by C. E. H., 141
Cure for Ringbone, by J. J. F., 142
A Good Sheep Rack, by T. Delafield, 144
Cashmere or Angora Hair, by J. S. Goe, 148
On Bitting Colts, by H. N. Thurber, 154
Sale of Mr. Peters' Ayrshires, 160
Thrush in Horses' Feet, by H. Dodge, 162
Barn Cellars for Stock, by L. F. Scott, 165

Horticultural Department.

How to Grow Early Turnips, by W. Bacon, 139
Fruit Growing and Wine Making in California, by Old Hurricane, 149
Pruning Apple and Peach Trees, 153
Plans for Gardens, 155
Lengthening of Trees, 155
Peas in Orchards, 155
Growing Grapevines from Cuttings, 155
How I Cultivate the Dahlia, by Mrs. E. G. Hawley, 165

Domestic Economy.

How to Preserve Smoked Meats in Summer, by H. F. Vail, 156
How to Make Bean Soup, three Recipes, 157
Kerosene as a Lubricator, Liniment, &c., by Rusticus, 159
Nice Puddings and Cake, by H. H., 159
How to Cleanse a Cistern, by H. Dodge, 162
Baked Beans without Pork, 166

Farm Buildings.

Smoke House, by N. Reed, 151
Barn Architecture, by W. H. S., 152
Hog Pen, by S. Massey, 162

The Dairy.

Dog Power for Churns, by St. Lawrence, 157
Butter and Cheese in the U. S., 140

Poultry-Yard.

Geese as Profitable Stock, by C. N. Bement, 158

Bee-Keeper's Department.

Are Italian Bees as Hardy as Black Bees, by L. L. Fairchild, 166

Birds.

White-Winged Crossbill, by J. P. Norris, 159

Illustrations.

Kohl Rabi, 146
Plans of Barn, 152
Corn Marker, 153
Rebuses, 165
Pruning Peach Trees, 153
Plans of Gardens, 155
White-Winged Crossbill, 159

MADAGASCAR OR LOP-EARED RABBITS.
A few pairs of fine Lop-Eared Rabbits for Sale by
JOHN HAVEN,
April 27—w4t. Fort Washington, New-York City.

WANTED TO PURCHASE OR EXCHANGE,
A Holstein Bull,
from two to four years old. Apply to J. P. J., care of the Country Gentleman. April 27—w3t.

PLANTS BY MAIL.
CRYSTAL WHITE BLACKBERRY... $1.00 per doz.
LENNING'S WHITE STRAWBERRY, 50 do.
BUFFALO SEEDLING do. 75 do.
The three dozen as above for $2. F. A. FLEMING,
April 27—w2t. Curwensville, Clearfield Co., Pa.

OUR DECEASED PRESIDENT.—There can be no more befitting remembrance of our late and noble President, ABRAHAM LINCOLN, than to find his portrait adorning the homes and firesides of every one throughout the land. The undersigned, of No. 131 Courtlandt-St., New-York, therefore respectfully invites attention to the following three excellent pictures of this great and good man. No amount of labor has been spared to make them worthy of their great original.

(1.)
A very fine and beautiful large steel engraving, with autograph, executed by a skillful and well known artist of New-York, copied from a photograph pronounced by persons most intimate with Mr. Lincoln, as a very correct likeness. Printed on plate paper, 19 by 24 inches. Price $2; 2 copies, $3, sent free of expense.

(2.)
A handsome, fine steel vignette portrait, with autograph, size 8 by 10 inches—also intended for framing—50 cents; 2 copies, 75 cents. Mailed carefully on rollers on receipt of price.

(3.)
An excellent card photograph, one of the best issued, 25 cts.; 2 copies, 35 cents, mailed free. Liberal discount to booksellers. Orders may be directed to New-York, address as above, or which is more preferable, to T. J. MORROW,
April 27—w&m1t. Brooklyn, N. Y.

ALDERNEYS FOR SALE.—A superior four-year old Cow, calved in January last, and then gave 15 quarts milk per day, also two very fine Helfer Calves, 3 months and 3 weeks old, for sale. These animals are thorough-bred, and belong to families of superior milkers.
Those desiring to purchase, and willing to pay full value for the above, will please address JOHN HAVEN,
Ap. 28—w3t. Fort Washington, New-York City.

STRAWBERRY PLANTS.

		Per 1,000.
50,000	TRIOMPHE DE GAND,	$4.00
	ALBANY SEEDLING,	4.00
	RUSSELL'S PROLIFIC,	12.00

5,000 Plants, $50.00.
And other varieties at reasonable rates. All first quality plants, young and vigorous. Well packed and delivered free of charge to the Philadelphia Express Offices.
Send for a Catalogue,
containing prices of all varieties, gratis to all applicants.
SAMUEL L. ALLEN,
April 27—w3t. Cinnaminson P. O., Burlington Co., N. J.

NANSEMOND
SWEET
POTATO PLANTS,
Strong and well Rooted,
from May to July, put up to carry 1,000 miles in good order. Prices, 500, $2; 1,000, $3; 5,000, $13; 10,000, $25. My plants of this variety produce good crops throughout the north. Send for circular of directions of cultivation, etc. Address
M. M. MURRAY, Loveland,
Apl 27—eow4t. Clermomt Co., Ohio.

READ THIS!
Ponder upon it, and be Wise,
AND BUY
Halsted's Patent Improved Horse Hay Fork.
THE CHEAPEST, SIMPLEST AND BEST,
entirely *iron* and *steel*, and *fully warranted*. Agents wanted. Send for circular. A. M. HALSTED,
April 13—weow6t. 67 Pearl-St., New-York.

CAYUGA CHIEF
MOWER AND REAPER,
WITH YOUNG'S IMPROVEMENTS,
FOR 1865.
Manufactured ONLY by
BARBER, SHELDON & CO.,
AUBURN N. Y.
Examine closely before buying, as there are others building the Cayuga Chief without *Young's Improvements.*
Send for Descriptive Catalogue.
BARBER, SHELDON & CO.,
March 16—w4mos. Auburn, N. Y.